



Polytechnic University of the Philippines
College of Social Sciences and Development
Department of Economics

INSTRUCTIONAL MATERIAL FOR ECON 30093 INTERNATIONAL ECONOMICS

COMPILED BY

NICETAS P. SISON
ALYSSA DALE I. AHORRO

COURSE DESCRIPTION

ECON 30093, INTERNATIONAL ECONOMICS, is a course in economics that presents an exposition of the theories and principles in international trade and international finance that are essential for understanding applying, analyzing, criticizing, and evaluating proposed and implemented economic policies and ultimately creating alternative solutions to international economic problems and issues.

COURSE OVERVIEW

The course covers topics in international economics from the micro and macroeconomic perspectives. Firstly, chapters 1-4, discuss international trade theory and international trade policy which represent the microeconomics aspect of international economics simply because they deal with individual countries that are treated as single economic units together with the relative prices of commodities produced by them. Secondly, chapters 5 and 6 discuss the foreign exchange rate market and exchange rates, and the balance of payments (BOP) which are topics that concern macroeconomics. Finally, a discussion of past and present international problems that have affected international trade, and international finance, has been included.

LEARNING OUTCOMES:

After this course, the student is expected to:

1. Maximize the use of microeconomic and macroeconomic tools of analysis to understand international trade theories and to evaluate international trade policies that address global trade problems;
2. Explain and discuss the various international trade theories, policies, and issues through the preparation and presentation of concept papers, position papers, and reaction papers;
3. Engage in debate over global economic issues that affect the Philippine economy and the global economy.

TABLE OF CONTENTS

Contents

CHAPTER I INTRODUCTION	1
1.1 Definition of International Economics	1
1.2 Components of International Economics	1
1.3 Internal Trade vs. International Trade	1
1.4 The Index of Openness	2
1.5.a .World Trade Situationer (Mohtadi,2019)	2
1.5.b Foreign Trade in the 21 st century (Klasen,2020).....	3
1.6 The Relevance of the Study of International Economics	3
EXERCISES.....	4
CHAPTER 2 THEORIES ON INTERNATIONAL TRADE.....	6
2.1 Mercantilism and Regulated Trade (Salvatorre,2001).....	7
2.2 Adam Smith's doctrine of absolute advantage	7
2.3.a Illustration of Comparative Advantage	9
2.4 Comparative Advantage Using Opportunity Cost	10
2.5. Assumptions of the Ricardian Model.....	11
2.6 Application of Absolute and Comparative Advantage (Mohtadi, 2019)	11
EXERCISES.....	12
2.4. The Hecksher - Ohlin (H-O) Model (Factor Endowments Theory).....	13
2.4.a The Leontief Paradox	15
2.4. b. H-O-S Model (Factor - Price Equalization Theorem- a corollary of the H-O model)	15
2.4.c. Stolper- Samuelson Model (Specific Factor Model)	15
2.5 Other Trade Theories.....	16
2.5.a Economies of Scale and International Trade.....	16
2.5.b. Imperfect Competition and International Trade (Trade based on Product Differentiation).....	17
2.5.b.1 Measurement of intra-industry trade.....	18
2.5.c Trade Based on Dynamic Technological Differences (Salvatorre, 2001)	19
2.5.c.1 Technological Gap Model (Posner model).....	19

2.5.c.2 Product Cycle Model (Vernon model).....	19
2.6 The Gravity Model (Mohtadi, 2019)	20
EXERCISES:	21
CHAPTER 3 INTERNATIONAL TRADE POLICY	23
3.1 Free trade vs. Regulated trade.....	24
3.2 Trade (Commercial) Policy.....	24
3.3 Nontariff Barriers (NTBs).....	28
3.4 Arguments Against Protectionism.....	30
EXERCISES	31
CHAPTER 4 MULTILATERALISM and REGIONAL INTEGRATION	33
4.1 Trade Policy Reforms	33
4.2 General Agreement on Tariffs and Trade (GATT)	34
4.3 World Trade Organization (WTO)	35
4.4 Economic Integration	35
4.5 Attempts at Economic Integration Among Developing Countries	37
EXERCISES:	38
CHAPTER 5 THE BALANCE OF PAYMENTS	39
5.1 Balance of Payments	40
5.2 Accounts in the BOP	40
5.3 Balance of Payments Accounting Principles.....	41
5.4 Overall BOP Position	42
5.5 The International Investment Position (IIP)	43
5.6 Uses of the BOP and the IIP.....	43
EXERCISES:	44
Chapter 6 THE FOREIGN EXCHANGE MARKET and EXCHANGE RATES	46
6.1 The foreign exchange market.....	46
6.2. Participants in the foreign exchange market.....	47
6.3. Functions of the foreign exchange market	47
6.4. The Exchange Rate	48
6.5.. Exchange Rate Ssystems/Regimes.....	49
6.6 Nominal vs Real Exchange Rate	51
6.7. Other Transactions in the Foreign Exchange Market.....	53
EXERCISES:	55

CHAPTER 7 CURRENT ISSUES IN INTERNATIONAL ECONOMICS.....	56
REFERENCES	58

CHAPTER I INTRODUCTION

Learning Outcomes:

After this chapter, the student is expected to:

1. Define and explain the meaning of international economics;
2. Discuss and explain the scope and components of international economics ;
3. Differentiate between internal and international trade;
4. Discuss and understand the concept of “openness” of a nation;
5. Understand the current world trade situation; and
6. Explain and appreciate the relevance of the study of international economics in understanding global economic issues.

1.1 Definition of International Economics

International economics deals with the economic interdependence among nations. It analyzes the flow of goods, services, and payments between a nation and the rest of the world (ROW), the policies directed at regulating the flow, and their effect on the nation's welfare (Salvatore, 2001). This economic interdependence among nations is affected by, and in turn, influences the political, social, cultural, and military relations among nations.

1.2 Components of International Economics

International trade theory and policies make up the microeconomic aspect of international economics because they deal with individual nations that are treated as single economic units . Also included in this aspect are the relative prices of commodities that are traded among nations. International trade theory analyzes the basis of trade and the gains resulting from trade. International trade policy, on the other hand, examines the reasons for and the effects of trade restrictions such as those involving tariffs and quotas primarily imposed on a nation's imports.

The macroeconomic aspect of international economics includes the nation's balance of payments (BOP), the general price level, and foreign exchange rates.

Basically, the study of international economics involve: 1.) international trade (microeconomics aspect) , and 2.) international finance (macroeconomic aspect).

1.3 Internal Trade vs. International Trade

Internal trade (intranational trade, domestic trade) involves the flow of goods, services, and factors of production within the different parts of the same nation. For instance, goods coming from Manila may be sold to the provinces in Mindanao. International trade (foreign trade, external trade), involve the flow of goods, services, and factors of production across national boundaries. Japan, for instance, may sell their manufactured cars to Philippine markets. The Philippines may also export its labor (OFWs) to other countries.

The flow of international trade, unlike intranational trade, may be hampered by differences in language, customs and traditions, and laws. The flow of goods, services, and factors may also be subject to trade restrictions like that of the imposition of tariffs on imports. Further, the exchange of goods, services, and resources among nations give rise to payments and receipts which involve different currencies and which change in value over time.

1.4 The Index of Openness

How “open” a country is to the ROW reflects the degree to which a country engages in international trade.

A country’s “openness” to the ROW is measured by the index of openness which is computed using the formula (Husted and Melvin);

$$\begin{aligned}\text{Index of Openness} &= X / \text{GDP} \times 100 \\ \text{OR} &= (X + M) / \text{GDP} \times 100\end{aligned}$$

Where X = total value of exports in a year
M = total value of imports in a year
GDP= Gross Domestic Product in a year

The value of the index can vary from zero to 100. Countries with high values of this index trade a lot with other countries which reflects relatively open economies while those with low values are said to be relatively closed economies because international trade is only a small part of their economic activity.

Values greater than 100 are possible. A value greater than 100 means that a country’s exports are higher than its overall level of production. Such a situation occurs if much of the economic activity of the country in question involve the assembly and export of final products made from imported raw materials or partially assembled materials. The value that is greater than zero comes from the fact that output or GDP is measured in terms of value-added while exports are measured in terms of the total value of goods (including the value of imported goods), therefore exports can be greater than the value-added.

1.5.a .World Trade Situationer (Mohtadi,2019)

Beginning in the 1980s, many emerging economies like China, India, and Brazil began to liberalize their trade policies and actively entered the global market. China became a major exporter of textiles and apparel, and other countries such as Malaysia, Turkey, Mexico, South Korea, Indonesia, and Thailand moved into manufacturing trade. Multinational corporations (MNCs) began to establish subsidiaries and moved some of their production activities to these countries. American companies first moved the production of apparel, shoes, and toys to developing countries, followed by the assembly of cars and electronic goods to take advantage of lower less -skilled labor costs. Today, many companies rely on foreign sources for high-skilled activities such as programming, software development, chip design, and financial analysis.

Currently, according to the World Trade Organization (WTO) , the top exporters of agricultural products is the European Union (EU) , comprising 38% of global exports, followed by the US, Brazil, China, and Canada. The EU is also the top exporter of fuels, mining products, and

cars. China is the world's largest exporter of office and telecommunication equipment, textiles, and clothing. The EU is the leading exporter of cars followed by the US and Canada. A major portion of global trade is in services, which includes transportation, travel, communications, construction, insurance, finance, computer and information technologies, and other business services such as operational leasing, technical and professional services, and cultural and recreational services. The United Kingdom (UK), China, Germany, and Japan are the largest exporters of these services.

1.5.b Foreign Trade in the 21st century (Klasen, 2020)

Following the 2008 Global Financial Crisis, financial systems have recovered to the greatest possible extent. Expected real gross domestic product (GDP) growth in the euro area reached 1.9% in 2019 and higher domestic demand including investment led to an expected real GDP growth of 2.9% in the US (WB, 2019). Economic activity continues to flourish in highly industrialized countries and is anticipated to remain robust to reach more than 2% in 2019. A cyclical recovery is also expected for most emerging markets and developing economies, especially if engaged in commodity exports. GDP in China is projected to grow by 6.2% on average in 2019 and 2020. Global trade of goods and non-factor services experienced a substantial recovery with a 5.4% in 2017 and expected 3.8% growth in 2018. Drivers for growth relevant for exporters were not only stronger in intra-regional trade development in Asia but also rising imports in the US, in particular due to additional fiscal stimulus. The rebound of international trade has also boosted exports and business investments in other economies.

However, there is a projected global economic weakening over the coming years in many economies. Moderate trade growth is anticipated over the coming years because of structural developments and broader trends putting the global trading system into question; to wit: 1.) digitalized processes and new forms of production involving automation; 2.) rebalancing of the Chinese economy as it moves away from high import components towards higher domestic consumption; 3.) slower growth of global value chains might lead to substantial problems for exporters; 4.) the unanticipated rise in inflation rates with central banks increasing rates also lead to negative consequences on trade; 5.) a rising number of armed conflicts on a global scale endanger continuous economic prosperity; and 6.) trade tensions between major economies e.g. US-China trade war, have further intensified in recent years leading to increasing problems for companies engaged in exports and foreign direct investments. * The very recent COVID-19 pandemic has also affected the global economy and has pushed it into a period of contraction.

Despite numerous gains from free trade between countries, multilateral efforts to enhance the global governance of trade seem to have come to a standstill, most notably already with the collapse of the Doha Round of negotiations under the World Trade Organization (WTO) (Destradi and Jakobert, 2015). As a consequence, the multilateral trading system faces a new set of challenges with harder problems and a fragmented policymaking landscape leading to a breakdown of international cooperation in many areas (Hale, et al; 2013). At the same time, there has been a proliferation of trade agreements at bilateral and regional levels, including a series of proposed "mega-regional" agreements such as the Regional Comprehensive Economic Partnership in Asia (RCEP) (Klasen, 2020).

1.6 The Relevance of the Study of International Economics

Amidst all of these concerns and problems that involve international trade, international finance, multilateral and bilateral agreements, regional integration and cooperation, that have affected the global economy, a knowledge of international economics is thus necessary to understand what goes on in the world of today in order to become well-informed consumers, citizens, and stakeholders in the global economy.

To the student, the study of international economics is needed for jobs in MNCs, international banks, and in multilateral organizations like the UN, WB, and the IMF.

REFERENCES:

Appleyard, D. & Field, A. (2010). International Economics. McGraw Hill. Ch. 1.
Klase, Andreas. Ed. (2020). The Handbook of Global Trade Policy. John Wiley & Sons.
Mohtadi, Shahruz. (2019). A Guide to International Economics. Business Expert Press. Ch1.
Salvatore, Dominick. (2001). International Economics. John Wiley & Sons. Ch 1.
Van den Berg, Hendrick. (2017). International Economics. A Heterodox Approach. Routledge.

EXERCISES

EXERCISE 1.1

MULTIPLE CHOICE: Encircle the letter of the best answer:

1. International economics basically studies
 - A. International trade only
 - B. International trade and international finance
 - C. International finance
 - D. Political economy
2. International trade involves the
 - A. The flow of goods across national boundaries
 - B. The flow of goods and services within the regions of a nation
 - C. The flow of goods, services, and factors across national borders
 - D. The flow of services within industries
3. The microeconomics component of international economics excludes the study of
 - A. International trade theory
 - B. International trade policy
 - C. Relative prices of commodities traded in the world market
 - D. Balance of Payments
4. A nation with a zero openness index means that
 - A. International trade comprises a very large bulk of its economic activities
 - B. It is a very open economy
 - C. It is a close economy
 - D. International trade comprises a small portion of its economic activities
5. A nation with an openness index equal to 100 signifies that
 - A. It relies heavily on international trade
 - B. Its economic activities involve exports whose value is worth &100
 - C. Its exports are equal to its imports
 - D. Its does not trade with the ROW
6. According to the WTO, the current top exporters of agricultural products include
 - A. European Union
 - B. United States
 - C. Canada
 - D. All of the above
7. Currently, the top exporters of cars in the world does not include
 - A. United States
 - B. China
 - C. Canada
 - D. None of the above
8. Which of the ff. is true of intranational trade?
 - A. The use of different currencies between trading partners hampers intranational trade
 - B. Intranational trade involves the flow of goods among different regions of the same nation
 - C. Differences in tariff rates hinder the smooth flow of goods among the different regions of the same nation
 - D. All of the above.

9. Which of the ff. does not belong to the macroeconomics aspect of international economics?
 - A. BOP
 - B. International trade theory
 - C. Exchange rates
 - D. General price level
10. Currently, a major portion of global trade is made up of
 - A. Manufactured goods
 - B. Agricultural products
 - C. Services
 - D. All of the above

Exercise 1.2

1. Choose a country and gather data on the value of its exports, imports, and its GDP for the past thirty years and present these in matrix form. Compute for the openness index for the different years and include these in the last column of the matrix. Describe the behavior of the index from the initial year to the final year. What is reflected by your data as to the openness to international trade of the country of your choice?

Exercise 1.3

1. Collect the current data on the top ten exporters of services in the world. Present the respective shares of each nation-exporter in a pie chart. Don't forget to acknowledge your source of data.

CHAPTER 2 THEORIES ON INTERNATIONAL TRADE

Learning Outcomes:

After this chapter the student is expected to:

1. Understand mercantilism and regulated trade;
2. Discuss free trade and the concepts of absolute and comparative advantage;
3. Analyze the Hecksher-Ohlin model and its variants;
4. Compare and contrast the different complementary theories of the H-O model; and
5. Discuss and explain models of imperfect competition.

2.1 Mercantilism and Regulated Trade (Salvatorre,2001)

During the seventeenth and eighteenth centuries a group of men (merchants, bankers, government officials, and even philosophers) wrote essays and pamphlets on international trade that advocated an economic philosophy known as **mercantilism**. The mercantilists maintained that the way for a nation to become rich and powerful was to export more than it imported. The resulting export surplus would then be settled by an inflow of gold bullions, or precious metals, primarily gold and silver. The more gold and silver a nation had, the richer and more powerful it was. Thus, the government had to do all in its power to stimulate the nation's exports and discourage and restrict imports (particularly the imports of luxury consumption goods). However, since all nations could not simultaneously have an export surplus and the amount of gold and silver was fixed at any particular point in time, one nation could gain only at the expense of other nations.

Note that the mercantilists measured the wealth of a nation by the stock of precious metals it possessed. In contrast, today we measure the wealth of a nation by its stock of human, man-made, and natural resources available for producing goods and services. The greater this stock of resources, the greater is the flow of goods and services to satisfy human wants, and the higher the standard of living in the nation.

At a more sophisticated level of analysis, there were rational reasons for the mercantilists' desire for the accumulation of precious metals. With more gold, rulers could maintain larger and better armies and consolidate their power at home; improved armies and navies also made it possible for them to acquire more colonies. In addition, more gold meant more money, i.e; more gold coins in circulation, and greater business activity. Furthermore, by encouraging exports and restricting imports, the government would stimulate national output and employment.

In any event, mercantilists advocated strict government control of all economic activity and preached economic nationalism because they believed that a nation could gain in trade only at the expense of other nations.(i.e; trade was a zero-sum game).

Today there seems to be resurgence of neo-mercantilism, as nations plagued by high levels of unemployment seek to restrict imports in an effort to stimulate domestic production and employment.

2.2 Adam Smith's doctrine of absolute advantage

According to Adam Smith, trade between two nations is based on absolute advantage. When one nation is more efficient than (or has an absolute advantage over) another in the production of one commodity but is less efficient than (or has an absolute disadvantage with respect to) the other nation in producing a second commodity, then both nations can gain by each specializing in the production of the commodity of its absolute advantage and exchanging

part of its output with the other nation for the commodity of its absolute disadvantage (Salvatorre, 2001).

For example, because of climatic conditions, Canada is efficient in growing wheat but inefficient in growing bananas. On the other hand, Nicaragua is efficient in growing bananas but inefficient in growing wheat. Thus, Canada has an absolute advantage over Nicaragua in the cultivation of wheat but has an absolute disadvantage in the cultivation of bananas. The opposite is true for Nicaragua.

Under these circumstances, both nations would benefit if each specialized in the production of the commodity of its absolute advantage and then traded with the other nation. Canada would specialize in the production of wheat (i.e; produce more than needed domestically) and exchange some of it for (surplus) bananas grown in Nicaragua. As a result, both more wheat and bananas would be grown and consumed, and both Canada and Nicaragua would gain.

2.2.1 An Illustration of absolute advantage (Mohtadi, 2019)

To illustrate trade based on absolute advantage, let us assume that there are two countries, Home and Foreign, and two products, shirts and computers. The average worker in Home can produce nine (9) shirts or five (5) computers in an hour, while the average worker in Foreign can produce four (4) shirts or seven (7) computers in an hour. Comparing the labor productivities in each country, we can observe that the worker at home is more productive in producing shirts and the Foreign worker is more productive in producing computers. Thus, Home has an absolute advantage in shirt production and Foreign in computer production.

Now, let us assume that both countries have ten (10) workers and each country devotes half of its workers to shirt production and the other half to computer production. Each country produces combination of goods shown in the table.

Table 1. Production Possibilities

	Home	Foreign	Total
Computers	25	35	60
Shirts	45	20	65

According to Smith, each country should then completely specialize in the production of the product on which it has absolute advantage, as seen in Table 2.

Table 2. Production Possibilities after Specialization

	Home	Foreign	Total
Computers	0	70	70
Shirts	90	0	90

Notice that after specialization, there is an increase in the total world production of both products, an increase of ten(10) in computer production, and an increase of 25 in shirt production, which is referred to as production gains in specialization. Whether or not the two countries will trade with each other will depend on the **terms of trade**, defined as the amount of imports a country can trade for its exports.

Suppose the two countries agree to a terms of trade of one shirt for one computer. Let Home keep 60 shirts for domestic consumption. It can export 30 shirts and import 30 computers. Similarly, let Foreign keep 40 computers for domestic consumption and import 30 shirts. Table 3 shows the consumption of the two products after specialization and trade.

Table 3. Consumption Possibilities after Trade

	Home	Foreign
Computers	30	40
Shirts	60	30

Notice that after trade, Home gains five (5) extra computers and fifteen (15) extra shirts, while Foreign gains five(5) extra computers and ten(10) extra shirts, which are referred to as consumption gains from trade.

2.2.2. Summary of Adam Smith's Model

1. Countries in the world differ in their ability to produce various goods.
2. World output would be expanded if rather than closing borders through mercantilist practices, countries would specialize in the production of goods in which they enjoy absolute advantage.
3. Such a situation is easy to achieve because it is the natural outcome of market forces combined with free international trade. Each good is cheapest in the country that has absolute advantage in its production.

2.3 David Ricardo and the Theory of Comparative Advantage

In 1817 David Ricardo published his "Principles of Political Economy and Taxation", in which he presented the law of comparative advantage.

According to the law of comparative advantage, even if one nation is less efficient than (has an absolute disadvantage with respect to) the other nation in the production of both commodities, there is still a basis for mutually beneficial trade. The first nation should specialize in the production of and export the commodity in which its absolute disadvantage is smaller (this is the commodity of its comparative advantage) and import the commodity in which its absolute disadvantage is greater (this is the commodity of its comparative disadvantage). (Salvatorre, 2001).

2.3.a Illustration of Comparative Advantage

Table 4. Production Possibilities

	US	UK
Wheat (bushels/manhr)	6	1
Cloth (yards/manhr)	4	2

Since the UK labor is half as productive in cloth but six times less productive in wheat with respect to the United States, the United Kingdom, has a comparative advantage in cloth. On the other hand, the United States has an absolute advantage in both wheat and cloth with respect to the United Kingdom, but since its absolute advantage is greater in wheat (6:1) than in cloth (4:2), the United States has a comparative advantage in wheat. To summarize, the United States' absolute advantage is greater in wheat, and so the United States has a comparative advantage in wheat. The United Kingdom's absolute disadvantage is smaller in cloth, so its comparative advantage lies in cloth. According to the law of comparative advantage, both nations can gain if the United States specializes in the production of wheat exports some of it in exchange for British cloth. At the same time, the United Kingdom specializes in the production of cloth and exports some of its cloth for US wheat (Salvatorre, 2001).

Note that in a two-nation, two commodity world, once it is determined that one nation has a comparative advantage in one commodity, then the other nation must necessarily have a comparative advantage in the other commodity.

2.4 Comparative Advantage Using Opportunity Cost

Mutually beneficial trade is still possible if instead of comparing productivities across countries, we compare the opportunity costs of producing each product in each country. Opportunity cost is the amount of a unit of product Y that must be given up in order to produce a unit of product X. If a country can produce a product at a lower opportunity cost, then it has a comparative advantage in the production of that product.

2.4.a Illustration of Comparative Cost Advantage (Mohtadi, 2019)

Table 5. Production Possibilities

	Home	Foreign
Computers	4	3
Shirts	8	4

For Home to produce eight (8) shirts it must give up four (4) computers, which means the opportunity cost of producing one shirt is a half computer. Similarly, to produce four (4) computers, it must give up eight (8) shirts, which means the opportunity cost of one computer is two (2) shirts. In Foreign, the opportunity cost of producing one computer is $4/3$ shirts, and the opportunity cost of producing one shirt is $3/4$ computers. We can see that Home can produce shirts at a lower opportunity cost, and Foreign can produce computers at a lower opportunity cost. Home has a comparative advantage in shirt production and Foreign in computer production.

With ten workers, let both countries produce and consume the combination in Table 6.

Table 6. Production and Consumption Possibilities Before Trade

	Home	Foreign	Total
Computers	16	9	25
Shirts	48	28	76

Whether the countries will trade with each other depends on the terms of trade. Home will export shirts only if it can get a price of more than half of a computer, and it will import computers if the price is less than two shirts. Foreign will export computers if it can get a price of more than $4/3$ shirts and it will import shirts if it can pay a price of less than $3/4$ computers. Let the international terms of trade be equal to one computer for $5/3$ shirts, which is between each country's domestic relative price of the computer. Home will then use its ten workers to produce 80 shirts and will up the production of computers, while Foreign will completely specialize and produce 30 computers.

If Home decides to consume 50 shirts, it can then export the remaining thirty (30) shirts and import 18 computers. Similarly, if Foreign decides to consume 12 computers, it can then export 18 computers and import 30 shirts as shown in Table 6.

Table 6. Consumption After Trade

	Home	Foreign	Total
Computers	18	12	30
Shirts	50	30	80

Notice that Home gains two extra computers and two shirts, while Foreign gains three computers and two extra shirts.

2.5. Assumptions of the Ricardian Model

Ricardo's insights are used to construct a model based on the following assumptions:

1. There are only two countries and two products.
2. Labor is the only factor of production, and each country has a fixed amount of labor that is fully employed.
3. Labor can work in both industries and can easily move between industries.
4. Countries may have different technologies, but firms in each country use the same technology to produce the two products.
5. There are constant returns to scale, which means that an increase in the number of workers by a certain percentage leads to an equal percentage increase in the level of output.
6. There is perfect competition in the market, which means there are many small-sized firms producing an identical product. The price of the product is equal to the extra cost of hiring the labor.
7. There are no barriers to trade and no transportation costs.

2.6 Application of Absolute and Comparative Advantage (Mohtadi, 2019)

To see an application of absolute and comparative advantage, we can look at the data for the US textile, apparel, and wheat industries. In 2014, the average sales per employee for all American apparel producers was \$70,000, while for the textile industry, producing the fabric and material inputs for apparel was even more productive, with annual sales per employee of \$232,000. In comparison, the average employee in China had sales per year in the apparel industry of \$27,000 and \$20,000 in the textile industry. Thus, a worker in the United States produced $\$70,000/\$27,000 = 2.6$ times more apparel sales than a worker in a China, and $\$232,000/\$20,000 = 12$ times more in textile sales. In the wheat industry, the typical farm in the

United States grew more than 10,000 bushels of wheat per worker while in China a typical farm produced only 300 bushels per worker so the US farm was $10,000/300 = 33$ times more productive. Thus, the US has an absolute advantage in the textile, apparel, and wheat industries. Then how do explain the fact that the US imports textiles and apparel from China and exports wheat to China?

Let us look at the opportunity costs of producing apparel, textiles, and wheat in each country. In the US, the opportunity cost of apparel is $10,000/\$70,000 = 0.14$ bushels of wheat, while the opportunity cost of textiles is $10,000/232,000 = 0.07$ bushels. In China, the opportunity cost of apparel is $300/\$20,000 = 0.013$, and the opportunity cost of textiles is $300/\$27,000 = 0.011$. Thus, China has a lower opportunity cost in producing apparel and textiles than the US. Similarly, in the US, the opportunity cost of wheat in terms of textiles is $\$232,000/10,000 = 23.2$, and the opportunity cost of wheat in terms of apparel is $\$70,000/10,000 = 7.0$, while in China, the opportunity cost of wheat in terms of textiles is $\$20,000/300 = 66.7$, and the opportunity cost of wheat in terms of apparel is $\$27,000/300 = 90$. Therefore, the US has a lower opportunity cost of producing wheat. This illustrates why the US exports wheat and imports textiles from China as predicted by the Ricardian model.

REFERENCES:

Appleyard,D. Ch 2.
Mohtadi,S.Ch 2.
Salvatorre,D. Ch 2.

Internet Sources:

<http://www.slideshare.net/InternationalEconomics/Intro>.SlideShare.

EXERCISES

EXERCISE 2.1 :

ESSAY: Explain your answers briefly but concisely:

1. Why is mercantilism considered a form of regulated trade?
2. There has been a resurgence of neo-mercantilism in the 20th century. Cite and briefly explain an example of a current trade policy that was adopted by a nation/nations that manifest traces of mercantilism.

EXERCISE 2.2:**PROBLEM-SOLVING:**

1. The table below shows bushels of wheat and yards of cloth that the US and the UK can produce within one hour of labor time under four different hypothetical situations. Identify in each situation, the commodity in which the US and the UK have an absolute advantage or disadvantage. Also indicate, in each situation, whether or not trade is possible between the two countries; the basis of trade (absolute or comparative advantage) and pattern of trade (whether country exports or imports the product).

	CASE A		CASE B		CASE C		CASE D	
	US	UK	US	UK	US	UK	US	UK
Wheat(bushels/mh)	4	1	4	1	4	1	4	2
Cloth(yards/mh)	1	2	3	2	2	2	2	1

2. Since the opportunity cost is a reflection of a country's comparative advantage, solve for the opportunity cost of food and clothing in Northland and Southland, given the ff. Information on each country's production of both commodities:

	Northland	Southland
Cloth (k/hr)	100	200
Food (k/hr)	100	400

A. In which country is the opportunity cost for cloth lower? For food lower? Interpret the opportunity cost of each commodity.

B. Which country has a comparative advantage in cloth? In food? Justify your answer.

3. Explain briefly why David Ricardo's theory of comparative advantage is a more plausible basis of trade rather than that of Adam Smith's.

2.4. The Hecksher - Ohlin (H-O) Model (Factor Endowments Theory)

According to the classical economists, comparative advantage was based on the productivity of labor among nations but they provided no explanation for such a difference in productivity except for possible differences in climate.

In the 1930s two economists, Eli Hecksher and Bertil Ohlin, developed a new model that explained comparative advantage, the Hecksher - Ohlin theory or more popularly called the H - O model.

The H-O model examines the basis for comparative advantage and the effect that trade has on factor earnings in the two nations. The model is based on the following assumptions:

1. There are two factors of production, labor and capital. Each country has a fixed endowment or supply of labor and capital. The supply of labor is measured as the total number of workers in a country, and the supply of capital is measured as the total number of machines or the total value of capital goods. A country will be relatively labor abundant if the ratio of the total number of workers relative to the total number of machines (L/K) is greater than that of another country.

Notice that it is the ratio of labor to capital (L/K) that determines factor abundance not the absolute number. For example, the US has more workers and capital than Switzerland, yet Switzerland has a higher capital-to-labor ratio (K/L) than the US and therefore is the capital- abundant country.

2. There are two products. The products are classified on their factor intensities. If a product requires more workers relative to machines, then the product is labor- intensive. If a product requires more machines relative to workers, then it is capital-intensive. Again, it is important to note that factor intensity is based on the ratio of capital to labor (K/L) used in producing a product.

3. The two products are produced in perfectly competitive markets. The firms are price takers, which means that the market sets the price of the product and a firm cannot influence the price.

4. There are two countries and both have access to the same technology in producing the two products. This is a departure from the Ricardian model, which assumed different technologies.

5. There are constant returns to scale.

6. Capital and labor cannot move between countries but can move within the country. Workers are qualified to work in both industries, and wages are the same in both industries. For example, if the shirt industry pays a higher wage than the computer industry, workers will leave the computer industry to work in the shirt industry. The increase in the supply of workers in the shirt industry will lower the wages in the shirt industry, and the decrease in the supply of workers in the computer industry will raise the wages in the computer industry. This process continues until wages in both industries are equal to each other. Similarly, machines can be used in both industries, and the price of capital referred to as the rental price of capital will be equal in both industries.

7. There are no barriers to free trade and no transportation costs.

8. Tastes in the two countries are identical, which means that if faced with the same relative price ratio and the same level of national income, each country will consume the same proportion of the two products.

Based on these assumptions, a labor-abundant country will tend to have lower wages relative to capital rents (w/r) and a capital-abundant country will have lower capital rents relative to wages (r/w). Therefore, a labor-abundant country can produce the labor-intensive product at a lower cost, and a capital-abundant country can produce the capital-intensive product at a lower cost. In other words, a labor-abundant country will have comparative advantage and will export the labor-intensive product, and import the capital-intensive product, while a capital-abundant country will have a comparative advantage in the capital-intensive product and will export the product and import the labor-intensive product.

Suppose Home is the labor-abundant country and shirts are labor-intensive, and Foreign is the capital-abundant country and computers are capital-intensive. Then, according to this theorem, Home will have a comparative advantage in shirt production and Foreign will have a comparative advantage in computer production. If the international terms of trade will lie between the domestic relative prices in the two countries, then Home will increase its production of shirts and export shirts and Foreign will increase its production of computers and will export computers. Just like the Ricardian model, Home will import computers and Foreign will import shirts. International trade permits each country to consume a combination of two products beyond what each can produce without trade.

When Home increases the production of shirts, the opportunity cost and the price of shirts increase, and the price of computers decreases due to lower import prices. As Foreign increases the production of computers, the opportunity cost and the price of computers increase, and the price of shirts decreases due to lower Home import price. This will continue until the relative prices of the products equal the international terms of trade.

The H-O theorem implies that high-income countries like the United States and Japan, which are capital-abundant, will be exporters of relatively capital-intensive products such as machinery, precision equipment, and chemicals, while lower-middle-income countries like Bangladesh and Vietnam, which are labor-abundant, will be exporters of labor-intensive products, such as clothing, toys, and sports equipment.

2.4.a The Leontief Paradox

There have been many empirical tests of the H-O theorem with mixed results, particularly using the two-country, two-factor model.

The first empirical test of the H-O model was conducted by Wassily Leontief using 1947 US data. Leontief found out that US import substitutes were about 30% more capital-intensive than US exports. Since the US is the most capital-abundant nation, this result was the opposite of what the H-O model predicted and became known as the Leontief paradox. This paradox could be explained by the ff: 1.) 1947 being a nonrepresentative year; 2.) the use of a two-factor model (L and K); 3.) the fact that US tariffs gave more protection to labor-intensive industries; and 4.) the exclusion of human capital from the calculations. (Salvatore, 2001).

The other empirical tests that were conducted also had mixed results for reasons like: 1.) the model assumes the same technologies and tastes in the countries and ignores the presence of trade barriers and transportation costs; 2.) it is difficult to measure the relative supplies of factors of production and relative factor intensities of products (Mohtadi, 2019).

2.4. b.c. H-O-S Model (Factor - Price Equalization Theorem- a corollary of the H-O model)

It was Paul Samuelson (1970 Nobel Prize winner in economics) who rigorously proved factor-price equalization. For this reason, his work is sometimes referred to as the Heckscher-Ohlin- Samuelson (H-O-S Theorem). This theorem holds only if the H-O theorem holds.

The Factor-Price Equalization Theorem states that “international trade will bring about equalization in the relative and absolute returns to homogenous factors across nations. As such, international trade becomes a substitute for international mobility of factors.

What this means is that international trade will cause the wages of homogeneous labor (i.e; labor with the same level of training, skills, and productivity) to be the same in all trading nations. Similarly, international trade will cause the return to homogeneous capital (i.e; capital of the same productivity and risk) to be the same in all trading nations. Both relative and absolute factors will be equalized (Salvatore, 2001).

2.4.c. Stolper- Samuelson Model (Specific Factor Model)

Two economists, Wolfgang Stolper and Paul Samuelson, developed a theory that demonstrated that with trade, the real income of the abundant factor rises, and the real income of the scarce factor falls. According to this theorem, the percentage change in the income of a factor of production will be higher than the percentage change in the price of the product that uses that factor intensively. For example, at Home, if after trade, the price of shirts increases by 5%, then wages will increase by more than 5%. Similarly, if the price of computers falls by 10%, the income of capital owners falls by more than 10%.

The Stolper-Samuelson theorem suggests that even though a country gains from free trade, within the country, some factors gain while other factors lose. Therefore, at Home, labor will be in favor of free trade, while capital owners will be against free trade (Mohtadi, 2019).

2.5 Other Trade Theories

Trade models based on comparative advantage are due to differences in productivities or factor endowments that explain inter-industry trade, which represents products in different industries, like aircraft and apparel, or wheat and oil. However, most of the merchandise among industrialized countries is in the form of intra-industry trade, which is trade in similar products, like cars for cars, or computers for computers. These countries have the same relative factor endowments, and the traded products have the same factor intensities, so the pattern of trade cannot be explained by the H-O model.

A new set of models has been developed to explain this pattern of trade. These models are based on economies of scale and imperfect competition.

2.5.a Economies of Scale and International Trade

Economies of scale refer to a decrease in average costs (ATC/Output) when there is an increase in output or scale of production. There are two kinds of economies of scale: external and internal.

External economies of scale occurs when the size of the whole industry gets larger, the firms within the industry enjoy lower average costs. The industry is characterized by many firms clustered in the same geographical area. Examples include the semiconductor industry in Silicon Valley, California, the entertainment industry in Hollywood, the banking and finance industry in New York and London, and the apparel industry in several cities in China.

Internal economies of scale refer to the decrease in average costs of a single firm when it increases its level of production. This is because a firm can spread its start-up and overhead costs over larger units of the product. Economies of scale or increasing returns to scale are internal to the firm. Internal economies lead to a market structure known as monopolistic competition. In this market, there are many small firms producing a slightly differentiate product. To remain competitive, the firm will concentrate on increasing its output to take advantage of economies of scale and lower average costs.

Increasing returns to scale (internal economies of scale) refers to the production situation where output grows more than proportionately than the increase in inputs or factors of production. That is, if all inputs are doubled, output is more than doubled; thus, average costs fall. Increasing returns to scale may occur because at a larger scale of operation a greater division of labor and specialization becomes possible. That is, each worker can specialize in performing a simple

repetitive task with a resulting increase in productivity. Furthermore, a larger scale of operation may permit the introduction of more specialized and productive machinery that would be feasible at a smaller scale of operation.

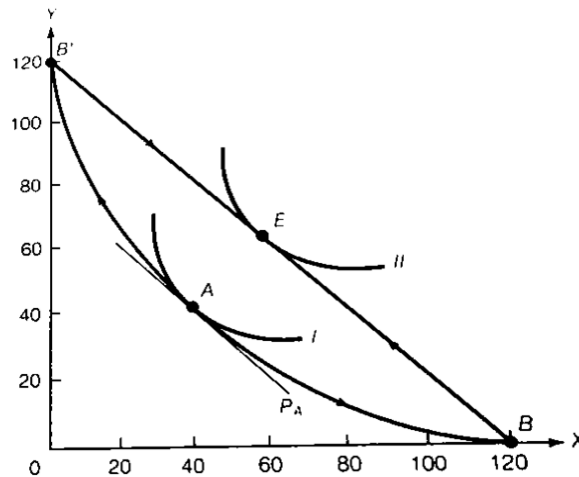


Figure 2.1. Trade Based on Economies

With the identical and convex to the origin (because of economies of scale) production frontiers and indifference maps, the no-trade equilibrium relative commodity price in the two nations is identical and given by P_A . With trade, Nation 1 could specialize completely in the production of commodity X and produce at point B. Nation 2 would then specialize completely in the production of commodity Y and produce at point B'. By then exchanging 60X for 60Y with each other, each nation would end up consuming at point E on indifference curve II, thus gaining 20X and 20Y.

While the H-O theory assumed constant returns to scale, international trade can also be based on increasing returns to scale. Increasing returns to scale can be regarded as complementary to the H-O theory in that they try to explain a portion of international trade not covered by the basic H-O theory.

2.5.b. Imperfect Competition and International Trade (Trade based on Product Differentiation)

A large part of the output of modern economies today involves differentiated rather than homogeneous products. Thus, a Ford is not identical to a Toyota, a Volkswagen, etc. As a result, a great deal of international trade can and does involve the exchange of differentiated products of the same industry or what is called intra-industry trade (p.17).

Intra-industry trade arises in order to take advantage of important economies of scale in production. That is, international competition forces each firm or plant in industrial countries to produce only one, or at most a few, varieties and styles of the same product rather than many different variety and styles. This is crucial in keeping unit costs (average costs) low. With few varieties and styles, more specialized and faster machinery can be developed for a continuous operation and a longer production run. The country then imports other varieties and styles from

other countries. Intra-industry trade benefits consumers because of the wider range of choices (the greater variety of differentiated products) available at lower prices made possible by economies of scale.

Several considerations are pointed out with respect to the intra-industry trade models developed by Helpman, Krugman, and Lancaster: (Salvatore, 2001).

1. Although trade in the H-O model is based on comparative advantage or differences in factor endowments (labor, capital, natural resources, and technology) among countries, intra-industry trade is based on product differentiation and economies of scale. Thus, while trade based on comparative advantage is likely to be larger when the difference in factor endowments among countries is greater, intra-industry trade is likely to be larger among economies of similar size and factor proportions.
2. With differentiated products produced under economies of scale, pre-trade relative prices of commodities may no longer accurately predict the pattern of trade. Specifically, a large country may produce a commodity at lower cost than a smaller country in the absence of trade because of larger national economies of scale. With trade, however, all countries can take advantage of economies of scale to the same extent, and the smaller country could undersell the larger country in the same commodity.
3. In contrast to the H-O model, which predicts that trade will lower the return of the nation's scarce factor, with intra-industry trade based on economies of scale it is possible for all factors to gain. This may explain why the formation of the European Union (EU) and the postwar trade liberalization in manufactured goods met little resistance by interest groups.
4. Finally, intra-industry trade is related to the sharp increase in international trade in parts and components of a product. International corporations produce or import various parts of a product in different countries in order to minimize their costs of production (economies of scale).

According to Mohtadi (2019), the development of global supply chains has created new trade patterns as companies in a country specialize in an activity or stage of production based on comparative advantage. Apple's iPhone and iPad are designed in the US, the iPhone's display is mainly made in Japan and South Korea, while the Touch ID sensor is made in Taiwan. Apple's list of suppliers stretches to more than 200 various suppliers located throughout the world. Apple's devices are mainly assembled in China, which is why we continue to see "made in China" on most of Apple products.

Comparative advantage seems to determine the pattern of **inter-industry trade** while economies of scale in differentiated products give rise to **intra-industry trade**. Both types of international trade occur in today's world. The more dissimilar are factor endowments (like that of between developed and developing countries), the more important are comparative advantage and inter-industry trade. On the other hand, intra-industry trade is likely to be dominant the more similar are factor endowments (like that among developed countries). One could say that inter-industry trade reflects natural comparative advantage while intra-industry trade reflects acquired comparative advantage.

2.5.b.1 Measurement of intra-industry trade

The level of intra-industry trade can be measured by the **intra-industry trade index (T)**:

$$T = 1 - \frac{|X - M|}{X + M}$$

where X and M , represent respectively, the value of exports and imports of a particular industry or commodity group and the numerator represents the absolute value of X and M . The value of T ranges from 0 to 1. $T = 0$ when a country only exports or only imports the good in question (i.e; there is no intra-industry trade). On the other hand, if the exports and imports are equal, $T = 1$ (i.e; intra-industry trade is maximum).

There is, however, a shortcoming in using the index T in measuring the degree of intra-industry trade. This results from the fact that we may get different values for T , depending on how broadly we define the industry or product group. The more broadly we define an industry, the greater will be the value of T . The more broad the definition of an industry, the more likely it is that a country will export some varieties of the differentiated product and import others. Thus, the T index must be used with caution. It can, however, be useful in measuring differences in intra-industry trade in different industries and changes in intra-industry trade for the same industry over time.

2.5.c Trade Based on Dynamic Technological Differences (Salvatorre, 2001)

On top of factor endowments (H-O model) , and the existence of economies of scale and product differentiation(Intra-industry trade model - Krugman & Lancaster model), dynamic changes in technology among countries can be another determinant of international trade.

2.5.c.1 Technological Gap Model (Posner model)

According to this model, a great deal of trade among industrialized countries is based on the introduction of new products and new production processes. These give the innovating firm and country a temporary monopoly in the world market. Such a temporary monopoly is often based on patents and copyrights, which are granted to stimulate the flow of inventions.

Let us take the case of the US as an example. As a relatively technologically advanced country, the US exports a large number of new high-technology products. However, as foreign producers acquire the new technology, they eventually are able to conquer the markets abroad, and even the US market for the product, because of their lower labor costs. In the meantime, US producers may have introduced still newer products and production processes because of the technological gap established.

A shortcoming of this model is that, it does not explain the size of technological gaps, the reason that these gaps arise, or how these are eliminated over time.

2.5.c.2 Product Cycle Model (Vernon model)

This model is an extension of the Technological Gap model. According to this model, when a new product is introduced, it usually requires highly skilled labor to produce. As the product matures and acquires mass acceptance; it becomes standardized; it can be produced by mass production techniques and less skilled labor. As a result, comparative advantage in the product shifts from the advanced country that originally introduced it, to less advanced countries, where labor is relatively cheaper. This may be accompanied by foreign direct investments from the innovating country to nations with cheaper labor.

Dominick Salvatore provided the US - Japan post WWII experience as a classic example of this model. Immediately after WWII, US firms dominated the international market for radios. However, within a few years, Japan was able to capture a large share of the market by copying US technology and utilizing cheaper labor. The US recaptured technological leadership with the development of transistors. But in a few years, Japan imitated the technology and was able to undersell the US.

An illustration of the Product Life Cycle Model

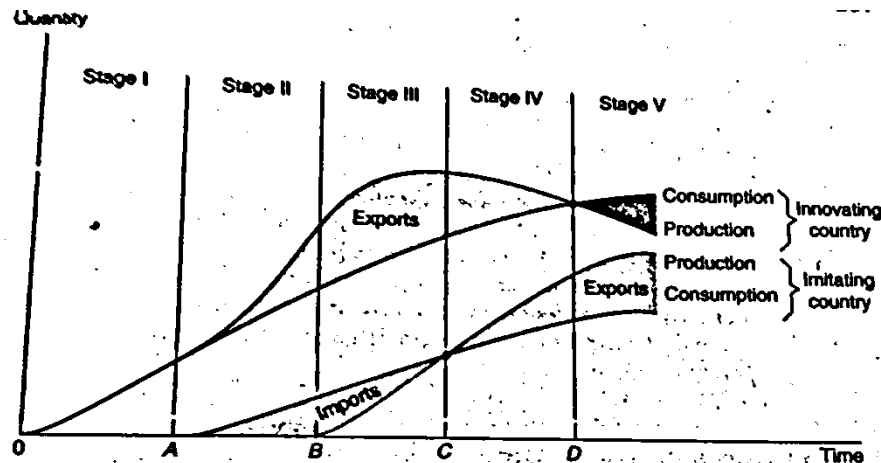


Figure 2.2 The Product Cycle Model. In Stage I (time 0A), the product is produced and consumed only in the innovating country. In stage II (AB), production is perfected in the innovating country and increases rapidly to accommodate rising demand at home and abroad. Stage III (BC), the product becomes standardized and the imitating country starts producing the product for domestic consumption. In stage IV (CD), the imitating country starts underselling the innovating country, and in stage IV (past point D) in the latter's market as well.

2.6 The Gravity Model (Mohtadi, 2019)

When we examine the global pattern of trade, we observe that the volume of trade is highest among high-income countries and countries that are geographically close to each other. This observation has led to the development of the gravity model of trade.

This model suggests that the volume of trade between two countries will be greater the larger the economic sizes of the countries, the shorter the geographical distance between them, and the lower the barriers to trade between them.

A country with a large economy can produce a larger number of varieties of products which can be exported to another country with a similar size economy. This is why 4 of the top 15 trading

partners of the US are Japan, Germany, the UK, and France, yet the US' top two trading partners are Mexico and Canada. One primary reason is the geographic proximity of these two countries to the US, which substantially lowers transportation costs.

Trade barriers also significantly affect the volume of trade between countries. One of the most interesting findings of gravity models of trade between the US and Canada is that even though the two countries have few national barriers to trade, there is much more trade between Canadian provinces than that between Canadian provinces and American states.

The gravity model has been used to examine other variables that affect the volume of trade. For example, countries that speak the same language trade more with each other. Countries trade more with former colonies and trade more with other countries that are sources of a large number of immigrants. Countries that are part of preferential agreements have significantly higher volumes of trade than others.

REFERENCES:

Appleyard, D.
Krugman , P. & Obstfeld, M.
Mohtadi, S. Ch 3.
Salvatorre, D. Ch 5, 6.

EXERCISES:

Exercise 2.3 : The H-O model and its corollaries

IDENTIFICATION: Write the term referred to in the ff:

- _____ 1. The two factors of production considered in the model
- _____ 2. The economies of scale that were assumed in the model
- _____ 3. The type of market structure that was assumed to exist
- _____ 4. The country where labor is relatively more abundant than capital
- _____ 5. The country where capital is relatively more abundant than labor
- _____ 6. The commodity whose production uses more capital relative to labor
- _____ 7. The commodity whose production uses more labor relative to capital
- _____ 8. A corollary to the H-O model that states that "international trade will

about equalization in the relative and absolute returns to homogeneous factors across nations.

- _____ 9. Another corollary to the H-O model that demonstrated that with trade, the real income of the abundant factor rises while the real income of scarce factor falls
- _____ 10. The Nobel Prize economist who proved that after trade prices of factors are equalized

Exercise 2.4

ESSAY: (H-O model)

1. Explain briefly why the H-O model is also called the Factor Endowments Theory.
2. Discuss why a labor-abundant country exports the labor-intensive commodity.
3. Why is the Leontief paradox a contradiction of the H-O theory?

Exercise 2.5:

(Other Theories)

TRUE or FALSE: Write TRUE if the statement is true; write FALSE if it is otherwise:

- _____ 1. In the imperfect competition model, constant returns to scale was assumed.
- _____ 2. Inter- industry trade is based on natural comparative advantage.
- _____ 3. Intra-industry trade involves trade in differentiated products.
- _____ 4. When $T = 1$, the value of a country's exports is equal to the value of its imports.
- _____ 5. Much of the trade between developed and developing countries is inter-industry trade.
- _____ 6. According to the gravity model of trade, the larger the size of economies that trade, the smaller is the volume of trade that results.
- _____ 7. According to the technological gap model, a firm exports a new product until Imitators in other countries take away its market.
- _____ 8. According to the product cycle theory, when a new product reaches the stage where it acquires mass acceptance and becomes standardized, comparative advantage in the product shifts away from the nation that originally introduced the product to the nation that imitated the product.
- _____ 9. Economies of scale in differentiated products give rise to inter-industry trade.
- _____ 10. The more broadly we define an industry, the greater will be the value of T .

Exercise 2.6: PROBLEM-SOLVING:

1. Find the degree of intra-industry trade if exports and imports are, respectively,
 - a. 1,000 and 1,000
 - b. 1,000 and 750
 - c. 1,000 and 500
 - d. 1,000 and 25
 - e. 1,000 and 0
2. Interchange the values of exports and imports in problem # 1. Compare the results in problems 1 and 2 , and briefly explain the difference.

Exercise 2.7:

ESSAY:

1. Explain briefly but concisely the basis of international trade according to the ff. Theories and provide an example for each one.

- a .H-O theory
- b Krugman and Lancaster model
- c Imperfect Competition model
- d Technological Gap model
- e Product Cycle Theory
- f Gravity model

CHAPTER 3
INTERNATIONAL TRADE POLICY

Learning Outcomes:

After this chapter the student is expected to:

1. Compare and contrast free trade and regulated trade;

2. Comprehend the nature of a tariff, its different types, its different effects, its costs and benefits vis-a-vis consumer and producer surpluses, and the rate of effective protection of a tariff;
3. Analyze with the aid of graphical illustrations the different effects of a tariff;
4. Discuss non-tariff barriers (NTBs) to trade, such as quotas, voluntary export restraints, export subsidies, and strategic trade policy and appraise their impact on trade; and
5. Discuss the different arguments for trade protectionism.

3.1 Free trade vs. Regulated trade

We have seen from the previous chapter that mercantilism advocated regulated trade i.e; trade with other countries always resulted in a favorable balance of trade. Imports were reduced while exports were promoted. Thus, international trade resulted in a “zero sum game” where only one trading partner gains while the other loses. The classicists, on the other hand, like Adam Smith and David Ricardo, advocated free trade where trading partners mutually benefited from trade, thus resulting in a “positive sum game”. Through trade, world output is maximized. Furthermore, the H-O model and the other theories on international trade permitted analysis of free trade and the gains resulting from it.

3.2 Trade (Commercial) Policy

Practically, all nations impose some restrictions on international trade. Since these restrictions and regulations deal with the nation's trade and commerce, they are generally known as **trade or commercial policies**. While trade restrictions are rationalized in terms of the nation's welfare, in reality they are usually advocated by special groups in the nation that stand to benefit from such restrictions.

3.2.a Tariff

The most important type of trade restriction has historically been a tariff. A tariff is a tax or duty levied on the traded commodity as it crosses a national boundary. An **import tariff** is a duty on the imported commodity while an **export tariff** is a duty on the exported commodity. Import tariffs are more important than export tariffs, thus, most of the discussion in this chapter focus on this type. Export tariffs are often applied by developing nations (periphery economies) on their traditional exports (Ghana, on its cocoa; Brazil on its coffee) to get better prices and raise revenues. Developing nations rely heavily on export tariffs because of their ease of collections. On the other hand, industrial countries (core economies), impose tariffs or other trade restrictions to protect some industry (labor-intensive industry), while using mostly income taxes to raise revenues.

Tariffs can be **ad valorem**, **specific**, or **compound**. The ad valorem tariff is expressed as a fixed percentage of the value of the traded commodity. For example, a 10% ad valorem tax is imposed on an imported bicycle. If the value of the bicycle is \$1,000, a tariff of \$100 is collected by the customs agency. On the other hand, the specific tariff is expressed as a fixed sum per physical unit of the traded commodity. For example, a tariff of \$100 is imposed on an imported bicycle. A compound tariff is a combination of an ad valorem and a specific tariff. For example, a \$50 specific tariff per bicycle plus a 5% ad valorem tariff. Most of the discussion in this chapter focus on the ad valorem import tariff.

The value of the imported product can be calculated based on the price paid or payable for the product based on the Free (or Freight) on Board (FOB) price or based on the Cost, Insurance, and Freight (CIF) price, which includes the cost of freight and insurance. All products shipped around the world are classified under the Harmonized Commodity Description and Coding System, commonly referred to as the “Harmonized System” (HS). Well-defined rules support it to achieve uniform classifications around the world (Mohtadi, 2019).

3.2.a.1. Partial Equilibrium Analysis of a Tariff (Salvatore, 2001)

As was mentioned in the previous chapter, partial equilibrium analysis uses the demand and supply curves to show equilibrium in the market. We shall do the same in the analysis of the effects and costs and benefits of a tariff.

Effects of a Tariff

A tariff can result in the following effects: revenue effect, consumption effect, production effect, trade effect, and dead weight loss. The partial equilibrium effects of a tariff can be analyzed with the use of the figure shown below:

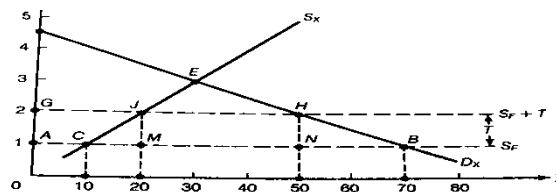


Figure 3.1 Partial Equilibrium Effects of a Tariff

D_x and S_x represent Nation 2's demand and supply curves of commodity X. At the free trade price of $P_x = \$1$, Nation 2 consumes 70X (AB), of which 10X (AC) is produced domestically and 60X (CB) is imported. With a 100 percent import tariff on commodity X, P_x rises to \$2 for the individuals in Nation 2. At $P_x = \$2$, Nation 2 consumes 50X (GH), of which 20X (GJ) is produced domestically and 30X (JH) is imported. Thus, the consumption effect of the tariff is (-) 20X (BN); the production effect is 10X (CM); the trade effect equals (-) 30X (BN+CM); the revenue effect is \$30 (MJHN).

Effect of a Tariff on Consumer Surplus and Producer Surplus

To further analyze the effects of a tariff on the economy, we introduce the economic concepts of consumer and producer surplus. **Consumer surplus** is an economic measure of a gain to a consumer which is calculated as the difference between what a consumer is willing to pay for a product and the actual or market price that the consumer pays for the product. For example, assume a consumer goes out shopping for a personal computer and is willing to spend \$1,500. If the price of the computer at the store is \$1,000, then there is a gain in consumer surplus of \$500. If the market price increases, then there will be a decrease in quantity demanded and a loss in consumer surplus; and if the market price decreases, then there will be an increase in quantity demanded and a gain in consumer surplus. On the other hand, **producer surplus** is an economic measure of a gain to a producer, which is calculated as the difference between the market price of the product which the producer receives after the sale of the product and the minimum price the producer is willing to accept for the product. Suppose a producer is willing to sell a computer for \$1,500 and the market price is \$2,000. If the producer sells the computer for \$2,000, it will gain a producer surplus of \$500. Producer surplus will increase if there is an increase in the market price and will decrease if there is a decrease in the market price.

Costs and Benefits of a Tariff

So, an import tariff will result in a gain in producer surplus and a loss in consumer surplus. The government also gains, because it receives more revenues from the imposition of the tariff. Thus, part of the total loss in consumer surplus is distributed to the producer as gains in producer surplus, and another part is distributed to the government as revenues. Two other parts are neither distributed to the government nor given to the producers. These losses are called the **deadweight losses** of the tariff. One part of the deadweight loss is called the consumption loss, which is due to the reduction in total consumption of the computers. The consumers would have been willing to pay higher prices above \$1,000 and up to \$1,100 to get the additional computers, yet the tariff prevents them from buying these computers. The second part of the deadweight loss is called the production loss. The tariff leads to an increase in domestic production of computers. The resources used to produce these additional units of computers could have been used in producing other goods where the country has comparative advantage. Thus, resources are taken away from producing the good where these are more efficient in to the production of the good where resources are less efficient in.

The figure shown below shows the effects of a tariff on consumer and producer surplus graphically.

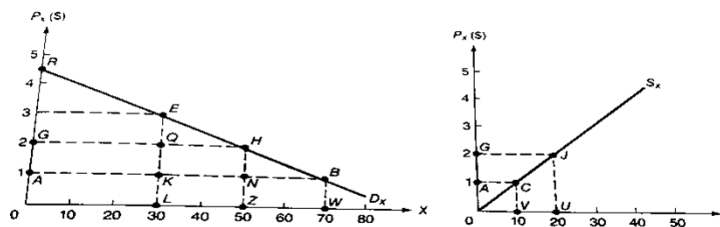


Figure 3.2 Effect of Tariff on Consumers and Producer Surplus

The left panel shows that a tariff increases the prices of commodity X from $P_X = \$1$ to $P_X = \$2$ results in a reduction in consumer surplus from $ARB = \$122.50$ to $GRH = \$62.50$, or by shaded area $AGHB = \$60$. The right panel shows that the tariff increase producer surplus by shaded area $AGJC = \$15$.

The Rate of Effective Protection

Sometimes a nation imposes a tariff to protect its domestic industries. A nation imports a raw material duty free or imposes a lower tariff on the importation of the input than on the importation of the final commodity produced with the imported input. This is done in order to encourage domestic processing and employment. For example, a nation may import wool duty free but impose a tariff on the importation of cloth in order to stimulate the domestic production of cloth. In this case, the **rate of effective protection** is greater than the **nominal tariff rate**. The rate of effective protection is calculated on the domestic value added or processing that takes place in the nation. Thus, it is important to producers because it indicates how much protection is actually provided to the domestic processing of the import-competing commodity. The nominal tariff rate, on the other hand, is calculated on the value of the final commodity. Thus, it is important to consumers because it indicates by how much the price of a commodity increases as a result

of the tariff. An example is provided to distinguish the nominal tariff rate from the effective tariff rate.

Suppose that \$80 of imported wool goes into the domestic production of a suit. Suppose also that the free trade price of the suit is \$100 but the country imposes a nominal tariff rate of 10% on each imported suit. The price of the imported suit to domestic consumers would be \$110. Out of this, \$80 represents imported wool, \$20 is domestic value added, and \$10 is the tariff. The \$10 tariff collected on each imported suit represents the 10% nominal tariff rate since the nominal tariff rate is calculated on the price of the final commodity ($\$10/\$100=10\%$) but it corresponds to a 50% effective tariff rate because the effective tariff rate is calculated on the value added domestically to the suit ($\$10/\$20=50\%$).

While consumers are only concerned with the fact that the 10% tariff increases the price of the imported suit that they buy by \$10, producers view this \$10 tariff as being 50% of the \$20 portion of the suit produced domestically. To the producers, the \$10 tariff provides 50% of the value of domestic processing. This represents a much greater degree of protection (five times more) than the 10% nominal tariff rate. It is this effective rate of tariff protection that is important to producers in stimulating the domestic production of suits to be able to compete with imported suits. Whenever the imported input is admitted duty free or a lower tariff rate is imposed on the imported input than on the final commodity produced with the imported input, the effective rate of protection will be greater than the nominal tariff rate.

The effective rate of protection is calculated using the formula: (Salvatorre, p.252)

$$g = \frac{t - a_i t_i}{1 - a_i}$$

where g = the rate of effective protection

t = the nominal tariff rate on consumers of the final commodity

a_i = the ratio of the cost of the imported input to the price of the final commodity without the tariff

t_i = the nominal tariff rate on the imported input

$$\text{Thus, } g = \frac{0.1 - (0.8)(0)}{1.0 - 0.8} = \frac{0.1 - 0}{0.2} = \frac{0.1}{0.2} = 0.5 \text{ or } 50\%$$

If a 5% nominal tariff rate is imposed on the imported input ($t = 0.05$), then

$$g = \frac{0.1 - (0.8)(0.05)}{1 - 0.8} = \frac{0.1 - 0.04}{0.2} = \frac{0.06}{0.2} = 0.3 \text{ or } 30\%$$

The following are conclusions on the relationship between the effective rate of interest and the nominal tariff rate on the final commodity:

1. If $a_i = 0$, $g = t$.
2. For given values of a_i and t_i , g is larger the greater is the value of t .
3. For given values of t and t_i , g is larger the greater the value of a_i .
4. The value of g exceeds, is equal to, or is smaller than t , as t_i is smaller than, equal to, or larger than t .
5. When $a_i t_i$ exceeds t , the rate of effective protection is negative.

3.3 Nontariff Barriers (NTBs)

Although tariffs have historically been the most important form of trade restriction, there are many other types of trade barriers. As tariffs were negotiated down during the postwar period, the importance of nontariff barriers has greatly increased.

3.3.a Import Quotas

Another trade policy instrument designed to protect a domestic import-competing industry is a quota. A quota is the most important nontariff trade barrier. It is a direct quantitative restriction on the amount of a commodity to be imported or exported. An **import quota** is a restriction on the quantity of a product that can be imported, which is achieved by the government issuing quota licenses. An import quota license gives the holder the right to import a specific amount of the product during a specific time period.

The effects of a quota are very similar to the effects of a tariff. Given that a quota limits the supply of imports, it leads to an increase in the price of both the imported and domestic product. The rise in the price results in an increase in domestic quantity supplied and a decrease in domestic quantity demanded. Consequently, there will be a gain in producer surplus, a loss in consumer surplus, and the associated deadweight losses. The difference between a quota and a tariff is that with the quota, the government does not receive any revenues. With a quota, the difference between the world price of the good and the higher post quota domestic price is called a **quota rent**. Quota rents are collected based on how the government allocates the licenses. Quota licenses can be allocated for free to domestic importing firms or individuals on a first-come-first-serve basis or on a proportional basis. Either way, the holder of the import licenses will pay the lower world price for the imports and then sell them at a higher price at home and collect the rents. Another way to auction the licenses is selling them at competitive basis to the highest bidder. Here, the government collects the rents, similar to the revenues collected through a tariff.

3.3.b. Voluntary Export Restraints (VER)

These refer to a case where an importing country induces another nation to reduce its exports of a commodity “voluntarily” under the threat of higher all-round trade restrictions, when these exports threaten an entire domestic industry. When VERs are successful, they have all the economic effects of import quotas, except that they are administered by the exporting country, and so the revenue effect or rents are captured by foreign exporters. An example of this is provided by the “voluntary” restraint on Japanese automobile exports to the US negotiated in 1981.

The Uruguay Round required the phasing out of all VERs by the end of 1999 and the prohibition on the imposition of new VERs.

3.3.c Tariff Rate Quotas

A tariff rate quota (TRQ) allows a specified quantity of goods to be imported at a lower rate (within the quota rate), whereas any imports above this level face a higher tariff rate (the above quota rate).

Under the rules of the World Trade Organization (WTO), quotas on most manufactured goods have been prohibited. WTO members have replaced quotas on agricultural products, textiles, and apparels with tariff rate quotas.

US sugar imports are strictly controlled by TRQs. The volume of these quotas is established by the US Department of Agriculture and the US Trade Representative allocates the TRQs among countries. Due to such quotas, American domestic raw sugar prices are above world prices, leading to considerable losses in consumer surplus and gains in producer surplus. Foreign sugar exporters that had been allocated the right to sell sugar into the US have also benefited from the rights.

3.3.d. Other Barriers to Trade

Most governments rely on other instruments to erect barriers to trade.

1. Local Content Requirement (LCR)

This is a regulation that requires that a minimum percentage of a product's total value must be produced domestically if the product is to qualify for zero tariff rates. The intended effect of these requirements is to pressure both domestic and foreign companies to use domestic workers or other inputs in the production of those products. LCRs are common in the automobile industry, particularly among developing countries, to shift their manufacturing base from assembly into the production of engines or transmissions. This regulation has the same effects as a quota, with the exception that it does not restrict the number of imports but allows the local companies to import and buy more domestic products.

2. Government Procurement Laws

These laws that require governments to purchase their goods and services from domestic producers. In the US, for example, there are "Buy American" provisions for all levels of governments, particularly at the state and municipal levels.

3. Technical Regulations or Standards

Governments commonly require goods to meet technical regulations or standards to be sold in the country. Such standards are designed to provide information about the product, ensure consumer safety, protect the environment, and guarantee product quality.

4. Health and Safety Standards

Governments also have health and safety standards for food and medicines that can at times be used to restrict trade. Another WTO agreement, the Sanitary and Phytosanitary Agreement establishes a basic set of rules for dealing with food safety and animal and plant health standards.

3.3.e. Subsidies

Subsidies are used by governments to encourage exports or discourage imports. Direct subsidies are cash payments to producers, while indirect subsidies take a variety of forms including price guarantees, low-interest loans, and tax breaks. An example of a direct subsidy is an export subsidy, which is a payment to firms for every unit exported, either a fixed amount or a fraction of the sales price.

The WTO has a set of rules for subsidies that may promote exports. Direct subsidies to exports are prohibited, except export subsidies used by the lowest-income developing countries.

3.3.f. Strategic Trade Policy

The use of subsidies to promote domestic companies is known as **strategic trade policy**. The theory behind this policy is that subsidies can help domestic companies capture economic

profits from foreign competitors. These industries are essential to the country because they provide additional benefits known as positive externalities to their industries in the country.

In addition to the agricultural industry, the high-technology and manufacturing sectors of many countries receive subsidies. For example, both Europe and the US provide subsidies to Airbus and Boeing, and the governments of Japan and South Korea have given direct subsidies to high-tech firms if they reach a certain level of export sales

3.4. Arguments Against Protectionism

3.4..a The Terms of Trade Argument

A tariff by a large country can lower the price of imports and thus produce a terms of trade gain. The terms of trade gain must be weighed relative to the deadweight losses of the tariff. The country's gain will be at the expense of the other country's loss, which may lead to retaliation by the other country.

3.4..b. The Domestic Employment Argument

The predominant argument for protection is the issue of jobs. Companies and their labor unions faced with import competition complain about the loss of jobs.

3.4..c. The Cheap Foreign Labor Argument

American companies complain that they cannot compete with foreign low-wage countries, such as Mexico and China, and a tariff should be imposed to equalize the difference in wages.

3.4..d. Infant industry Argument

This argument claims that a temporary tariff is necessary to protect the domestic infant industry against imports. This argument is used by developing countries to encourage their manufacturing industries. These countries do not have the same production technology and cost advantages as the established industries in the developed countries. By placing a tariff or a quota, the government can limit foreign access to the domestic market, thus permitting domestic industry to expand. After several years of protection, the domestic firms will find ways to lower their costs and effectively compete with the foreign firms both domestically and globally.

3.4..e. The Unfair Trade Practices Argument

This argument intends to protect a domestic industry from unfair trade practices like **dumping**. Dumping is selling a product at a lower price in the export market than at home. There are three types of dumping: sporadic dumping, predatory dumping, and persistent dumping. **Sporadic dumping** is temporary and designed to sell the excess supply of a product by lowering the price for the export market. **Predatory dumping** is to eliminate the domestic competition and capture the foreign market. The foreign company becomes the single producer that can then raise the price. **Persistent dumping** is a form of price discrimination that is practiced by companies that have market power. When a company has market power at home but faces competition in the world market it can charge a higher price at home and a lower price abroad.

3.4.f. The National Security Argument

Some industries such as the weapons industry, the steel industry, and some strategic technology industries, are vital to the national security of a country. In peaceful times, imports may capture a significant share of the markets for these products and reduce the size of these industries. In the case of a war, imports may be stopped, and the country will not have adequate supply of these products for national defense. To protect against this possibility, these industries argue that they must be protected.

3.4.g. The Cultural Identity Argument

This argument is to protect the cultural industries of a country, which include movies, television programs, music, newspapers, theater and the art. Countries complain that the global dominance of the US in the entertainment industry and pop culture will lead to a reduction in their domestic industries and threaten the cultural identity of the country.

3.4.h. Public Revenue Argument

For many developing countries, where it is difficult to collect income and property taxes, tariffs can be collected at a lower cost at ports and border crossings.

REFERENCES:

Appleyard, D. & Field, A.
Krugman, P. & Obstfeld, D.
Mohtad, S. Ch 4,5.
Salvatore, D. Ch 8,9.

EXERCISES

Exercise 3.1:

IDENTIFICATION:

Write in the space provided the word/term referred to in the ff:

- _____ 1. A tax or a duty that is imposed on a traded commodity as it crosses a national boundary.
- _____ 2. A duty that is imposed on an exported commodity.
- _____ 3. A duty expressed as a fixed sum per physical unit of the traded commodity
- _____ 4. A duty expressed as a fixed percentage of the value of the traded commodity.
- _____ 5. The effect of a tariff that reduces domestic consumption of the imported commodity.

- _____ 6. The effect of a tariff that expands domestic production.
- _____ 7. The effect of the tariff that provides income to the government.
- _____ 8. The difference between the price that consumers actually pay and the price that they are willing to pay.
- _____ 9. The area above the supply curve that shows the gain that goes to producer
- _____ 10. The effect of a tariff that leads to the transfer of resources from the efficient production of the exportable commodity to the less efficient production of the importable commodity.

Exercise 3.2:

ESSAY: Explain briefly your answers to the ff:

1. Explain the difference between a nominal tariff and an effective tariff.
2. Discuss the effect of a tariff on consumer surplus; on producer surplus.
3. With the aid of a graphical illustration, indicate the different effects of a tariff by labelling these in the graph.

Exercise 3.3:

PROBLEM-SOLVING:

1. Calculate the rate of effective protection when (the nominal tariff on the final commodity) is 40%, a_i (the ratio of the cost of the imported input to the price of the final commodity in the absence of a tariff) is 0.5, and t_i (the nominal tariff on the imported input) is 40%.
2. Based on problem #1, recalculate g with the ff values of t_i :
 - a. $t_i = 20\%$
 - b. $t_i = 0$
 - c. $t_i = 100\%$

Exercise 3.4:

TRUE or FALSE: Write TRUE if the statement is true and FALSE if it is otherwise:

- _____ 1. An import quota is a direct quantitative restriction on the amount of imports.
- _____ 2. A TRQ allows a specified quantity of a commodity to be imported at a higher quota rate.
- _____ 3. The quota rent is the price for the use of land.
- _____ 4. The VER is a nontariff barrier where an importing country induces another country to reduce its exports voluntarily under the threat of higher trade negotiations.
- _____ 5. Direct subsidies are given to exporting firms in the form of price guarantees, low interest rates, tax breaks.
- _____ 6. The Local Content Requirement is a nontariff barrier which requires that a minimum fraction of the total value of the product be produced

- domestically in order to avail of zero tariffs.
- _____ 7. Strategic trade policy helps domestic companies in the high-technology and manufacturing sectors to capture the economic profits of their foreign competitors.
- _____ 8. Dumping is a common practice of countries and is considered as a fair trade practice.
- _____ 9. The Public Revenue Argument for protectionism is used by developing countries since tariffs and other NTBs are easier to manage than the collection of income taxes.
- _____ 10. The Infant Industry Argument protects infant industries from foreign competition until such a time that they are able to compete on their own.

Exercise 3.5:

ESSAY: Discuss the ff. arguments for protection by providing an example:

1. National Security Argument
2. Domestic Employment Argument
3. Infant Industry Argument

CHAPTER 4

MULTILATERALISM and REGIONAL INTEGRATION

Learning Outcomes:

After this chapter the student is expected to:

1. Distinguish between the unilateral, bilateral, and multilateral approaches to trade reforms;
2. Comprehend the role of the GATT and the WTO in international trade;
3. Discuss the different types of economic integration, preferential trade agreements, free trade areas, customs unions, common markets, and economic union; and
4. Trace the history of attempts of developing countries towards economic integration.

4.1 Trade Policy Reforms

Ever since Adam Smith's *Wealth of Nations* was published in 1776, the vast majority of economists have accepted the proposition that free trade among nations improves overall economic welfare. While virtually all economists think free trade is desirable, they differ on how best to make the transition from tariffs and quotas to free trade. There are three approaches that have been used to trade reform and these are: unilateral, multilateral, and bilateral.

Some countries, such as Britain in the 19th century and Chile and China in recent decades, have undertaken unilateral tariff reductions- reductions made independently and without reciprocal action by other countries. The advantage of unilateral free trade is that a country can reap the benefits of free trade immediately. Countries that lower trade barriers by themselves do not have to postpone reform while they try to persuade other nations to follow suit. The gains from such trade liberalization are substantial: several studies have shown that income grows more rapidly in countries open to international trade than those closed to trade. Examples of this situation are those of China's rapid growth after 1978 and that of India's after 1991, when major trade reforms were undertaken by these two countries.

For many countries, unilateral reforms are the only effective way to reduce trade barriers. However, multilateral and bilateral approaches - dismantling trade barriers in concert with other countries- have two advantages over the unilateral approach. First, the economic gains from international trade are reinforced and enhanced when many countries or regions agree to a mutual reduction in trade barriers. By broadening markets, concerted liberalization of trade increases competition and specialization among countries, thus giving a bigger boost to efficiency and consumer incomes. Second, multilateral reductions in trade barriers may reduce political opposition to free trade in each of the countries involved. This is because groups that otherwise would oppose or be indifferent to trade reform might join the campaign for free trade if they see opportunities for exporting to other countries in the trade agreement. Consequently, free trade agreements between countries or regions are a useful strategy for liberalizing world trade.

The possible outcome of trade negotiations is a multilateral agreement that includes all major trading countries. Then, free trade is widened to allow many participants to achieve the greatest possible gains from trade.

4.2 General Agreement on Tariffs and Trade (GATT)

In 1947, the United States and some of its allies began trade negotiations under a new set of rules known as the GATT. Under the terms of the agreement, countries began to meet periodically, called Rounds, to reduce tariffs and settle trade policy issues. The first five rounds were organized around reducing tariffs on specific products. With the Kennedy Round (1964-1967), countries negotiated percentage reductions in tariffs for a range of goods. The Tokyo Round ((1973-1979) established rules on subsidies and prohibited export subsidies on manufactured goods but not on agricultural goods or textiles and apparel. The Uruguay Round which started in 1986, addressed these issues and after over years of negotiations completed the round and led to the creation of the World Trade Organization (WTO), which began operations in 1995, and today has grown to 164 member-countries.

The ninth major round of trade negotiations began in 2001 in the city of Doha, Qatar. Known as the Doha Development Round. Its aims were to decrease farm subsidies by developed countries; reduce tariff rates on manufactured goods by developing countries; reduce

tariffs on textiles and apparel that poor countries cared about; free up trade in services; and negotiate rules in four areas- competition, investment, government procurement, and trade facilitation. After years of negotiations, the developing countries refused to accept the large reductions in their industrial tariffs in exchange for greater access to the agricultural markets of rich countries, ending the negotiations in 2008.

As a multilateral trade agreement, the GATT requires its signatories to extend **most-favored-nation (MFN)** status to other trading partners participating in the WTO. MFN status means that each WTO member receives the same tariff treatment for its goods in foreign markets as that extended to the “most favored nation” country competing in the same market, thereby ruling out preference for, or discrimination against, any member country.

4.3 World Trade Organization (WTO)

In 1995, the GATT became the WTO. The WTO oversees four international trade agreements: the GATT, the General Agreement on Trade and Services (GATS), and agreements on trade-related intellectual property rights and trade-related investments (TRIPS and TRIMS, respectively). The WTO is now the forum for members to negotiate reductions in trade barriers, the most recent of which is the Doha Round that was mentioned earlier.

Some of the provisions of the WTO (GATT) are as follows:

1. Member countries cannot discriminate against each other. Every member must extend most favored status (**MFN**) to all other members.
2. A country is permitted to temporarily raise tariffs when the imports cause or threaten serious injury to domestic producers.
3. Countries are permitted to form free trade areas and customs unions if the tariffs with the outside parties are not higher or more restrictive than the tariffs before the formation of the agreements.
4. Foreign goods should receive national treatment; they should be treated similarly to the same ways that domestic goods are treated once they enter a nation's markets.

The WTO has several functions.. It ensures that the member countries implement the reductions in tariffs and other trade barriers. It periodically conducts a trade policy review of its members to make sure that members comply with its rules and agreements. WTO also has a “dispute settlement” process, which formalizes the process by which member countries can settle their trade disputes. If one country's government accuses another country's government of violating world trade rules, a WTO panel rules on the dispute; the panel's ruling can be appealed to an appellate body. If the WTO finds that a member country's government has not complied with the agreements it signed, the member is obligated to change its policy and bring it into conformity with the rules. If the member finds it politically impossible to change its policy, it can offer compensation to other countries in the form of lower trade barriers on other goods. If it chooses not to do this, then other countries can receive authorization from the WTO to impose higher duties on goods coming from the offending member country for its failure to comply.

Although the WTO embodies the principle of nondiscrimination in international trade, Article 24 of the GATT permits formation of free trade areas and customs unions among its members.

4.4 Economic Integration

The theory of economic integration refers to the commercial policy of discriminatively reducing or eliminating trade barriers only among the countries joining together. The degree of economic integration ranges from preferential trade arrangements, to free trade areas, customs union, common markets, and economic unions. The advantage of such bilateral or regional arrangements is that they promote greater trade among the parties to the agreement. They may also hasten global trade liberalization if multilateral negotiations run into difficulties. Recalcitrant countries excluded from bilateral agreements, and hence not sharing in the increased trade these bring, may then be induced to join and reduce their own barriers to trade. Proponents of these agreements have called this process “competitive liberalization”, wherein countries are challenged to reduce trade barriers to keep up with other countries.

4.4.a. Preferential Trade Arrangements

This is the loosest form of economic integration. These arrangements provide lower trade barriers among participating countries than on trade with nonmember countries. The best example of a preferential trade arrangement is the British Commonwealth Preference Scheme established in 1932 by the United Kingdom with members and some former members of the British Empire. Another example of a PTA is the Trans-Pacific Trade Partnership (TPP) which established a free trade area among 12 countries that border the Pacific Ocean: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam, and the United States. In 2017, US President Trump decided to leave the partnership agreement.

The Regional Comprehensive Economic Partnership Agreement (RCEP) is an agreement to broaden and deepen ASEAN's engagement with Australia, China, Japan, Korea, and New Zealand. The objective of the RCEP is to establish modern, comprehensive, high-quality and mutually beneficial partnership that will facilitate the expansion of regional trade and investment to contribute to global economic growth and development. Accordingly, it will bring about market and employment opportunities to businesses and people in the region.

4.4.b. Free Trade Area (FTA)

A free trade area is a form of economic integration wherein all barriers are removed on trade among members, but each nation retains its own barriers to trade with nonmembers. Some examples of free trade areas are: European Free Trade Association (EFTA), North American Free Trade Agreement (NAFTA), MERCOSUR, and the ASEAN Free Trade Area.

4.4.c. Customs Union

A customs union is an agreement between two or more countries to remove all tariffs and nontariff barriers among themselves (as in a free trade area), and in addition sets up a common external tariff and other trade restrictions against nonmembers. An example of this is the European Customs Union formed in 1957.

4.4.d. Common Market

A common market goes beyond a customs union by allowing the free movement of labor and capital among member countries. The European Customs Union achieved the status of a common market in 1993.

The ASEAN Economic Community (AEC) which represents the seventh largest economy, was inaugurated on January 1, 2016. The AEC aims to create a single market and

production base for the free flow of goods, services, investment, capital, and skilled labor within ASEAN. The new Community offers expanded opportunities and inevitable challenges for multinationals investing in this diverse market.

4.4.d. Economic Union

An economic union goes still further by harmonizing or even unifying the monetary and fiscal policies of member states. This is the most advanced type of economic integration. Examples are the United States (US) which is a complete economic and monetary union and the European Union (EU) which is a monetary union.

4.5 Attempts at Economic Integration Among Developing Countries

As summarized by Dominick Salvatore, hereunder is a list of the different forms of economic integration that developing countries have formed. Some of these attempts at economic integration met with limited success while some failed. These attempts were encouraged by the success met by the European Union (EU).

1. The Central American Common Market (CACM) established by Costa Rica, Guatemala, El Salvador, Honduras, and Nicaragua in 1960, which was dissolved in 1969 and revived in 1990.
2. The Latin American Free Trade Area (LAFTA) established in 1960 by Mexico and most of South America which hoped to accelerate the process of integration and establish a common market. In 1980 the LAFTA was superseded by the Latin American Integration Association (LAIA).
3. The Southern Common Market (Mercosur) formed by Argentina, Brazil, Paraguay, and Uruguay in 1991, became a customs union in 1995, and was joined by Bolivia and Chile in 1996.
4. The Free Trade of the Americas (FTAA) established in 1998 with the goal of free trade among the 34 democratic countries of North and South America by 2005.
5. The Caribbean Free Trade Association (CARIFTA) set up in 1968 and transformed into a common market (CARICOM) in 1973.
6. The East African Economic Community, established in 1967 by Kenya, Tanzania, and Uganda and collapsed in 1997.
7. The West African Economic Community formed in 1973.
8. The 19 member preferential trade area of Eastern and Southern Africa, which extends from Sudan to Mozambique, was established in 1981 and became a customs union before the end of the decade.
9. The Association of Southeast Asian Nations (ASEAN) though primarily a political association, decided that it would also move toward a common market. Thus, the ASEAN Economic Community (AEC) was inaugurated in January of 2016.

REFERENCES:

- Cohn, T. pp.20-26; 209-236; 278-280.
Mohtadi, S. Ch 6.
Salvatore, D. Ch 10.
Van den Berg, H. PP.364-370.

Internet Sources:

<http://www.jonesday.com>>2016/02

<http://www.wto.org/> english/the wto_e/

EXERCISES:

Exercise 4.1:

IDENTIFICATION: Write on the space provided the word/term referred to in the ff. statements:

- _____ 1. This trade reform involves one country deciding independently without reciprocal action from other countries. .
- _____ 2. The approach in trade reform which involves an agreement between two countries.
- _____ 3. A form of economic integration wherein all barriers are removed on trade among members , but each nation retains its own barriers to trade with nonmembers.
- _____ 4. This form of economic integration allows free movement of labor and capital member countries.
- _____ 5. An economic integration among nations that allows no tariffs among

- members and follow the same tariff rates imposed on nonmembers.
- _____ 6. The status given to participating member of the WTO where countries are given the same treatment as the other competing countries in the international market.
- _____ 7. The approach in trade reform which allows many countries to participate in Trade and enjoy the benefits from trade.
- _____ 8. The term used to refer to the periodical meetings of GATT (WTO) members to reduce tariffs and settle trade issues.
- _____ 9. The round of trade negotiations that eventually led to the creation of WTO.
- _____ 10. The most advanced type of economic integration.

Exercise 4.2:

PAPER PRESENTATION:

Write a paper that covers a comprehensive discussion of a type of economic integration (of your choice). Be sure to discuss (IN YOUR OWN WORDS, no “ copy, paste”) the nature, structure, and provisions embodied in the trade agreement.

CHAPTER 5 THE BALANCE OF PAYMENTS

Learning Outcomes:

After this chapter the student is expected to:

1. Define the balance of payments;
2. Understand the different accounts in the balance of payments;
3. Distinguish the current account from the capital and financial accounts;
4. Understand the Overall BOP position of a country; and
5. Understand the International Investment Position(IIP) and compare it to the BOP.

In 2020, the country experienced adversities that challenged not only its people, but also the economy. GDP growth rate experienced the lowest level for the past years. Aside from the GDP, economists look into the balance of payments (BOP) position of a country to determine its economic performance vis-a-vis its international transactions with the rest of the world (ROW)

over a given period of time. The BOP provides an introduction into the macroeconomic aspect of international economics.

Due to the pandemic, the Philippines recorded a BOP surplus because of the country's excessive borrowing. What does this indicate of the economic performance of the country?

5.1 Balance of Payments

The balance of payments (BOP) is a summary statement in which all transactions of the residents of a nation with the residents of all other nations are recorded during a specific period of time, usually within a calendar year. An international transaction refers to the exchange of a good, service, or asset (for which payment is usually required) between the residents of one nation and the residents of other nations. However, gifts and certain other transfers (for which no payment is required) are also included in a nation's balance of payments.

The question of who is a resident of a nation also requires some clarification. A person is considered as a resident of a nation when he has stayed or intends to stay in that country for one year or more. Thus an overseas Filipino worker (OFW) can remain a resident of the Philippines or can become a non-resident depending on the length of his job contract abroad. Similarly, a business enterprise is considered a resident of a country if it engages for a year or more, in the production of goods or services in a significant scale in that country. Branches and subsidiaries of foreign companies are treated as residents of countries where they operate their business. However, a liaison or a representative of a foreign company, regardless of its length of stay, does not qualify as a resident enterprise. Government instrumentalities like embassies, consulates, military establishments stationed abroad remain as residents of the country they represent.

Also, the balance of payments has a time dimension. Thus, it is the flow of goods, services, gifts, and assets between the residents of a nation and the residents of other nations during a particular period of time, usually a calendar year.

5.2 Accounts in the BOP

The balance of payments can be divided into two accounts: Current Account and Capital Account and Financial Accounts. Because the BOP is one reflection of a nation's financial stability in the world market, the International Monetary Fund (IMF) uses these accounts to make decisions such as qualifying a country for a loan. The IMF also provides the information to its members so that they can make informed decisions about investments and trade.

5.3. The **current account** presents receipts and payments from trade in goods and services, transfer payments and income flows over a given time period. Thus, it includes all items of income and outlay- imports and exports of goods and services, investment income and transfer payments in the form of gifts received from or given to the foreign residents. It is conceptually similar to the net exports in the national income/output accounts. Specifically, the current account is composed of the balance on goods and services, which is commonly known as the trade balance, and which is derived from adding net services and net goods together. Net primary income includes all earnings from investment while the net secondary income refers to non-market transfers. Some examples of transactions that can be found in this account are OFW remittances and unconditional aid given by international institutions/organizations like the World Bank. These transactions are irreversible; they cannot be undone in the future.

When total exports/receipts exceed total imports/payments, the current account is in surplus. It is in deficit if the reverse is observed. If the current account balance is in surplus, the country is a "net lender" to the ROW in the amount of the surplus or the excess in the current account transactions. Net lending occurs when the national saving is more than the country's

investment in real assets. If in deficit, the country is said to be a "user of funds" and thus, is considered as a net borrower from abroad in order to fill in the deficit/shortage. In this case, the country invested more than what its national saving can finance.

$CA(\text{Current Account}) = \text{NET GOODS AND SERVICES} + \text{NET PRIMARY INCOME} + \text{NET SECONDARY INCOME}$

Thus, if $CA > 0$, the current account balance is positive, or the current account is in surplus, while if $CA < 0$, the current account is negative, or the current account is in deficit.

The other account is the **capital and financial account**. Capital Account has two components: Purchase/ sale of non-financial assets such as intellectual property rights, and capital transfers such as a conditional foreign aid given in developing countries. Capital transfers are also grants and donations, the intention of which is for investment, which is in contrast to grants and donations lodged under current transfers whose intention is for consumption. The financial account shows the transactions in foreign financial assets and liabilities which include all the inflows and outflows of investments. Financial account consists of direct investment and portfolio investment. Direct investment refers to capital participation in a company in which the investor has a lasting or permanent interest. This is manifested by ownership of at least 10% of the company's equity. Portfolio investment, on the other hand, is short term in contrast to direct investment which is long term. Portfolio holdings maybe in the form of stocks, bonds and notes, and money market instruments which are tradable and therefore, can be easily acquired or disposed of. This include the transactions involving financial derivatives and reserve assets. In case of stockholdings, a portfolio investor is differentiated from a direct investor if he owns less than 10% of a company's total equity. This account is reversible, it can be undone in the future. $CAFA(\text{Current Account \& Financial Account}) = \text{CAPITAL ACCOUNT} + \text{FINANCIAL ACCOUNT}$ Thus, if the $CA(\text{Capital Account}) > 0$, there is a surplus in the capital account, while if the $CA < 0$, there is a deficit in the capital account.

So, $BOP = CA + CAFA$

To sum up, if the balance of payment is equal to zero, one account is in the negative or in deficit and one is positive or in surplus. Mathematically,

If $CA + CAFA = 0$

$+CA = -CAFA$
Surplus Deficit

$-CA = +CAFA$
Deficit Surplus

5.3 Balance of Payments Accounting Principles

International transactions are classified as credits or debits. Credit transactions are those that involve the receipt of payments from foreigners. Debit transactions are those that involve the making of payments to foreigners. Credit transactions are entered with a positive sign, and debit transactions are entered with a negative sign in the nation's balance of payments. The export of goods and services, unilateral transfers (gifts) received from foreigners, and capital inflows are entered as credits (+) because they involve the receipt of payments from foreigners. The import of goods and services, unilateral transfers or gifts made to foreigners, and capital outflows involve payments to foreigners and are entered as debits (–) in the nation's balance of payments.

Financial inflows can take either one of two forms: an increase in foreign assets in the nation or a reduction in the nation's assets abroad. Financial outflows can take the form of either an increase in the nation's assets abroad or a reduction in foreign assets in the nation because both involve a payment to foreigners.

In recording a nation's international transactions, the accounting procedure known as double-entry bookkeeping is used. This means that each international transaction is recorded twice, once as a credit and once as a debit of an equal amount. The reason for this is that in general every transaction has two sides.

For example, suppose that a domestic corporation exports P800, 000 of goods to be paid for in three months. The Philippines first credits goods exports for P800, 000 since this goods export will lead to the receipt of a payment from foreigners. The payment itself is then entered as a financial debit because it represents a financial outflow from the Philippines. That is, by agreeing to wait three months for payment, the Philippine exporter is extending credit to, and has acquired a claim on, the foreign importer. This is an increase in Philippine assets abroad and a debit. The entire transaction is entered as follows in the Philippine balance of payments:

	Credit (+)	Debit (-)
Goods exports	P800,000	
Financial outflows		P800,000

The International Transactions of the Philippines

Here is an example of the Balance of Payments in the Philippines for 2020.

Balance of Payments (in million US\$)		
	Q2	
	2019	2020
Current Account	-931	4382
Capital Account	22	8
Financial Account*	-278	152
Net Unclassified Items	1622	-62
Overall BOP**	991	4177

*Positive balance in the financial account indicates net outflows, while a negative balance indicates net inflows.

**The overall BOP position is equal to the current account plus the capital account minus the financial account plus net unclassified items. Details may not add up to total due to rounding.

5.4 Overall BOP Position

The overall BOP position is a summary measure of the performance of the country's external transactions. This can be estimated using two approaches: 1.) the sum of the current account balance and capital and financial account balance, or 2.) the change in net international reserves due to transactions. Ideally, these two approaches should yield the same result. However, in reality, they do not equate due to data imperfections in the current account and in the capital and financial account. The discrepancy in these two approaches is termed as the "net unclassified items" or "errors and omissions" To maintain the identity of the two approaches, the following presentation is adopted in the BOP.

+ Current Account Balance
 +Capital and Financial Account Balance
 +Net Unclassified Items

= Overall BOP Position

= Change in NIR (Net International Reserves) due to transactions

The country's balance of payments (BOP) position recorded a higher surplus of US\$4.2 billion in Q2 2020 from the US\$991 million posted in the same quarter last year. The BOP position rose significantly due to the reversal in the current account to a surplus, following a substantial reduction in the trade in goods deficit. The sluggish performance of both imports and exports of goods reflected the adverse impact of the COVID-19 pandemic, including the disruptions in the global demand and supply chains. Meanwhile, the financial account reversed to net outflows mainly on account of the turnaround of portfolio investments to net outflows. This, however, was tempered by the decline in net outflows of other investments and the increase in net inflows of direct investments. **(Source: *Bangko Sentral ng Pilipinas*)**

5.5 The International Investment Position (IIP)

The IIP is a companion statistic to the BOP. The BOP is a flow estimate since it records transactions within a given period of time. The IIP on the other hand, is a stock estimate as it records the country's foreign assets and foreign financial liabilities outstanding as of a certain period. The stock is the result of all the past flows plus adjustments such as exchange rate movements to account for the value of the financial asset /liability as of date of reporting. The IIP links with the financial account of the BOP. Similar to the BOP, the categories of the IIP are direct investments, portfolio investments, financial derivatives, and other investments. Assets and liabilities are presented separately. International reserves are also part of the country's assets. The balance in the IIP that is, assets less liabilities, or the Net International Investment Position, measures the country's financial standing with the ROW. A net asset position reflects net claims of residents on non-residents and thus may indicate some degree of stability. Meanwhile, a net liability position reflects net exposure of residents to non-residents and thus to a certain extent , vulnerability.

5.6 Uses of the BOP and the IIP

The BOP and the IIP are important tools for national and international policy formulation as countries have become increasingly interdependent. Policy makers are guided by the sources of imbalances as presented in the BOP and IIP and therefore become better equipped in determining and implementing adjustment measures. For instance, a deficit in the current account may have stemmed from lower exports than imports. Given this scenario, national development programs could be directed to increase competitiveness in the global market for local products and/or develop new industries that will produce import substitutes. The use of these statistics, the BOP and the IIP, is enhanced when taken together as the combined use of the BOP and IIP, provides a glimpse of the relationship between flows and stocks. One example is the link between trade in goods and direct investments, as this would reveal how dependent export earning potential is on foreign capital and technology.

References:

IMF Statistics Department & IMF Committee on BOP Statistics.
 Pilbeam, K. Ch 1.
 Mohtadi, S. Ch 7.
 Salvatorre, D. Ch 13.

EXERCISES:

Exercise 5.1.

IDENTIFICATION: Write the word/term referred to in the ff:

- _____ 1. An account in the BOP which covers trade in goods, services, income, and current transfer.
- _____ 2. This account in the BOP consists of direct investments, portfolio investments and other forms of investments.
- _____ 3. It records a country's foreign financial assets and foreign outstanding liabilities as of a certain period.
- _____ 4. It is a summary of the economic transactions of a country with the ROW.
- _____ 5. Transactions that involve the receipt of payments from foreign countries.
- _____ 6. These transactions are entered with a negative sign in the BOP.
- _____ 7. The current account balance that signifies that the country is a net lender to the ROW.
- _____ 8. The accounting procedure that is used in recording a country's transactions with the ROW.
- _____ 9. Capital participation in a company which is manifested by a 10% ownership in the company's equity.

_____ 10. It is a summary measure of a country's performance in its external transactions.

Exercise 5.2.

TRUE or FALSE: Write TRUE if the statement is true and FALSE if it is otherwise:

_____ 1. Any transaction that earns foreign exchange for a country is a debit transaction in the BOP.

_____ 2. When a nation has a balance of trade deficit its exports are greater than its imports.

_____ 3. A nation has a capital account surplus when its capital inflows are greater than capital outflows.

_____ 4. The IIP is a stock estimate while the BOP is a flow estimate.

_____ 5. The Net International Investment Position of a nation measures its financial standing with the ROW.

_____ 6. A portfolio investor owns more than 10% of a company's equity.

_____ 7. The financial account includes direct investment and portfolio investment.

_____ 8. Financial inflows can take the form of a decrease in the foreign assets of a nation abroad.

_____ 9. A person is considered a resident of a nation if he has stayed or intends to stay in the country for six months or more.

_____ 10. The current account in the BOP shows receipts and payments in trade in goods and services, transfer payments and income flows.

Exercise 5.3.

ESSAY: Briefly explain your answers to the ff:

Why is there a need for double- entry bookkeeping in the BOP?

1. Distinguish between a current account surpluses from a capital account surplus.

2. What is meant by the overall BOP Position of a nation? Does this mean that the current and capital accounts balances be surpluses?

3. Why and how can the BOP and the IIP be used as guides to policy making?

ACTIVITY:

PAPER PRESENTATION

Prepare a paper that shows the overall BOP Position of the Philippines for the years 2010-2020. Describe the performance of the country in its external transactions for the given period.

Chapter 6

THE FOREIGN EXCHANGE MARKET and EXCHANGE RATES

Learning Outcomes:

After this chapter the student is expected to:

1. Define a foreign exchange market;
2. Identify the participants in the foreign exchange market;
3. Enumerate and understand the different functions of the foreign exchange market;
4. Define the exchange rate and understand the two ways of expressing/ computing it;
5. Distinguish the fixed exchange rate system from the flexible exchange rate system;
7. Differentiate between the nominal exchange rate and the real exchange rate; and
- 8 Discuss arbitrage, the spot rate and the forward rate; hedging and speculation.

6.1 The foreign exchange market

The need for a foreign exchange market arises because international trade in goods and services, and in financial assets almost always involve the exchange of different national currencies. Were the world economy to have a single currency, then a foreign exchange market would not exist. A US importer will generally have to pay a Japanese exporter in yen, a German exporter in euros, and a British exporter in pounds. For this reason, the US importer will have to

buy these currencies with dollars in the **foreign exchange market**. The foreign exchange market is not a physical place. It is a market where various national currencies, foreign currencies, or foreign exchange, are bought and sold. What is fascinating about the foreign exchange market is the huge sum of money that are exchanged on a daily basis. According to the Bank of International Settlements' survey, London is the main center for foreign exchange trading. Other financial centers are located in New York, Tokyo, Singapore, Paris, and Frankfurt. The most heavily traded currency is the US dollar (the vehicle currency) because the currency is widely used to denominate international transactions.

6.2. Participants in the foreign exchange market

The participants in the foreign exchange market are the ff:

1. Retail clients (traditional users)
2. Commercial banks
3. Brokers
4. Central banks

Retail clients are the businesses, international investors, multinational corporations (MNCs), etc. Specifically, they are the exporters, importers, tourists, investors, traders, speculators, corporate treasurers. Normally, they do not purchase or sell foreign currencies themselves, rather they operate by placing buy/sell orders with commercial banks.

Commercial banks buy/sell orders from their retail clients and buy/sell currencies on their own account (proprietary trading) so as to alter the structure of their assets and liabilities in different currencies. These banks deal directly with other banks or through foreign exchange brokers. In addition to commercial banks, other financial institutions, e.g; merchant banks, are engaged in buying and selling currencies for proprietary purposes and on behalf of their customers in finance-related transactions.

Often banks do not trade directly with each other; rather they offer to buy and sell foreign currencies via **foreign exchange brokers**. Operating through such brokers is advantageous because , since they collect buy and sell quotations from banks, the most favorable quotation is obtained quickly and at a very low cost. However, one disadvantage of dealing with a broker is that a small brokerage fee is payable which is not incurred in a straight bank-to-bank deal. Each financial center normally has just a handful of authorized brokers through which commercial banks conduct their exchanges.

Normally, the monetary authorities, **the central bank**, of a country are not indifferent to changes in the external value of their currency, and even though exchange rates of the major industrialized nations have been left to fluctuate freely since 1973, central banks frequently intervene to buy and sell their currencies in a bid to influence the rate at which their currency is traded. Previous to 1973, under a fixed exchange rate system, the monetary authorities were obliged to purchase their currencies when there is excess supply, and sell the currency when there is excess demand.

6.3. Functions of the foreign exchange market

1. Transfer of funds or purchasing power from one nation to another

By far the principal function of foreign exchange markets is the transfer of funds or purchasing power from one nation and currency to another. This is usually accomplished by an electronic

transfer and increasingly through the Internet. With it, a domestic bank instructs its correspondent bank in a foreign monetary center to pay a specified amount of the local currency to a person, firm, or account.

The demand for foreign currencies arises may arise under different situations , to name a few : 1.) when tourists visit another country and need to exchange their national currency for the currency of the country they are visiting; 2.) when a domestic firm wants to import from other nations; 3.) when one wants to invest abroad, etc. On the other hand, a nation's supply of foreign currencies may arise from: 1.) foreign tourist expenditures in the nation; 2.) from export earnings; 3.) from receiving foreign investments, etc.

A nation's commercial banks act as clearing houses for the foreign exchange demanded and supplied in the course of foreign transactions by the nation's residents.

2. Credit function

Credit is usually needed when goods are in transit and also to allow the buyer time to resell the goods and make the payment. In general, exporters allow 90 days for the importer to pay at the foreign department of the commercial bank. As a result, the exporter receives payment right away and the bank will eventually collect the payment from the importer when due.

3. Provide the facilities for hedging and speculation

Hedging and speculation account for a major part of foreign exchange trading. Hedging and speculation are are involved with the avoidance of a foreign exchange risk and making a profit out of it. These shall be discussed in the latter part of this chapter.

6.4. The Exchange Rate

The exchange rate is simply the price of one currency in terms of another. For instance, the exchange rate could be defined as the price of the Philippine peso in terms of the US dollar. There are two methods of expressing the exchange rate: 1.) domestic currency units per unit of a foreign currency; and 2.) foreign currency units per unit of the domestic currency.

Using the first method: suppose the domestic currency is the Philippine peso P, and the foreign currency is the US dollar, \$; the exchange rate in this case is: p/\$, say for example, P50.00/\$1.00. This means that P50.00 is needed to buy \$1.00. For the second method, the exchange rate would be \$.02/P1.00, meaning, \$.02 is needed to buy P1.00. The second method is the reciprocal of the first.

While it is not important which method is used in expressing the exchange rate, it is necessary to be careful when talking about a rise or fall in the exchange rate because the meaning will vary differently depending upon which definition is used.

Using the first method, a rise in the exchange rate e.g; P/\$, from P50.00/\$1.00 to P55.00/\$1.00, means that more pesos have to be given to buy a dollar; the peso has depreciated in value, or equivalently, the dollar has appreciated in value. Using the second method, a rise in the exchange rate e.g; \$/P, \$.02/P1.00 to \$.05/P1.00, means that more dollars are obtained per peso; the peso has appreciated and the dollar has depreciated.

6.5.. Exchange Rate Systems/Regimes

An international monetary system /regime refers to the rules, customs, instruments, facilities, and organizations for effecting international payments. These systems can be classified according to the way in which exchange rates are determined or according to the form that international reserve assets take. Under the exchange rate classification, two of these systems are the fixed exchange rate system and the flexible or freely floating exchange rate system.

1. The **Fixed/ Pegged Exchange Rate System** refers to an exchange rate regime where the value of a currency is fixed, or pegged, to the value of another currency, to the average value of a selection of currencies, or to the value of some other commodity, such as gold. This will be decided by the central bank and can be maintained by government intervention. If the value of currency is raised, there is **revaluation** of the currency while if the value is lowered, there is **devaluation** of the currency.

The Philippines has been on this exchange rate regime from the post war period up to the early 1970s. Under this system, if for instance, the Philippines establishes a fixed exchange rate to the US at the rate P/\$. In figure 1, we depict an initial foreign exchange market equilibrium in which the supply of US dollars equals its demand at the fixed exchange rate P/\$. But suppose, for some unspecified reason, the demand for dollars in the private FOREX rises one day to D'2. At the fixed exchange rate, P/\$, private market demand for dollars is now Q2 whereas supply of dollars is Q1. This means there is excess demand for dollars in exchange for peso in the private FOREX.

To maintain a credible fixed exchange rate, the Central Bank (now called the Bangko Sentral ng Pilipinas) would immediately satisfy the excess demand by supplying additional dollars to the FOREX market. That is, they sell dollars and buy pesos in the private FOREX. This would cause a shift of the supply curve from S\$1 to S\$2. In this way the equilibrium exchange rate is automatically maintained at the fixed level.

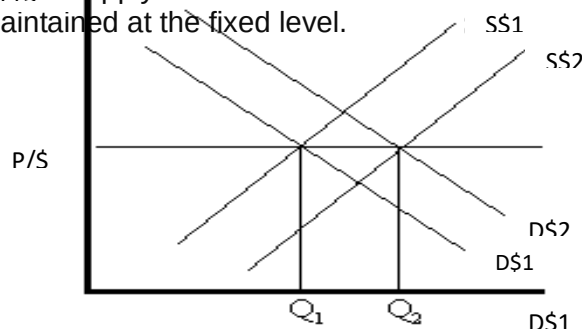


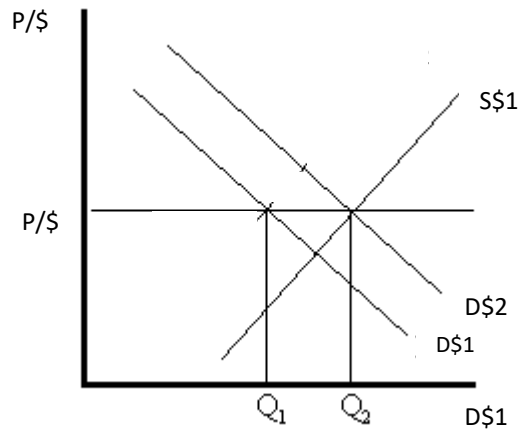
Figure 6.1

In Figure 2, the diagram shows the supply of dollars (S\$) equals demand for dollars (D\$) at the fixed exchange rate P/\$. For some reason, the demand for dollars in the foreign exchange market falls one day to D\$1. At the fixed exchange rate, P/\$, market demand for dollars is now Q1 whereas supply of dollars is Q2. This means there is excess supply of dollars in exchange for Peso in the FOREX.

In this case, an excess supply of dollars also means an excess demand for peso in exchange for dollars. The bank can satisfy the extra peso demand by entering the FOREX and selling peso in exchange for dollars. This means they are supplying more peso and demanding

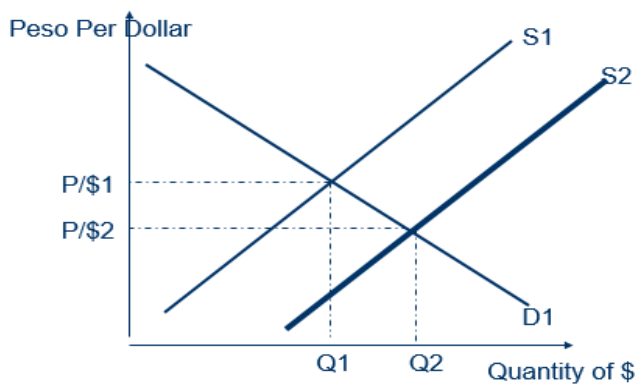
more dollars. This would cause a shift of the demand curve from $D\$1$ back to $D\$2$. Since this intervention occurs immediately, the equilibrium exchange rate is automatically and always maintained at the fixed level.

Figure 6.2



2. The **Flexible Exchange Rate System** is one where the exchange rate is determined by supply and demand within the foreign exchange market. The value of the currency is determined solely by market forces in the foreign exchange market and not by government intervention. Thus, the exchange rate fluctuates as the demand/supply for the currency fluctuates. **Appreciation** occurs when a currency gains in value relative to other currencies; thus, appreciation refers to a decline in the domestic price of the foreign currency, while **depreciation** occurs when a currency loses value relative to other currencies; depreciation refers to an increase in the domestic price of the foreign currency.

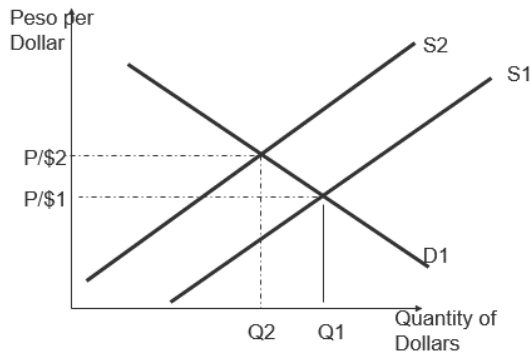
Figure 6.3: Appreciation of the peso



As shown in the figure, as the supply of dollars in the market increases holding its demand constant, the peso-dollar exchange rate decreases from $P/\$1$ to $P/\$2$, which means the dollar becomes cheaper and the peso becomes more expensive. This means that the peso can buy more dollars and the dollar can buy less pesos. The peso, in this case, has appreciated. The definition of

exchange rate in this instance is the domestic currency units per unit of the foreign currency.

Figure 6.4: Depreciation of the peso



As shown in the figure, as the supply of dollars in the market decreases holding its demand constant, the peso-dollar exchange rate increases from P/\$1 to P/\$2, which means the dollar becomes more expensive and the peso becomes cheaper. This means that the peso can buy less dollars while the dollar can buy more pesos. The peso has depreciated. The definition of exchange rate still remains to be that of domestic currency units per unit of the domestic currency.

From the post war period up to the beginning of the 1960s, the Philippines maintained the official par value of P2.00 to \$1.00. At the outset, the foreign sector started to grow robustly; however, in December, 1949, the government imposed import and exchange controls to conserve foreign exchange. The experience of the country under the fixed exchange regime was characterized by mounting external balances and a sudden and large devaluation of the peso when the prevailing exchange rate could no longer be defended. In February 21, 1970, the Philippines adopted the floating exchange rate system. This was a consequence of the breakdown of the Bretton Woods Agreement which provided the basis of the fixed exchange rate regime. The exchange rate system that was operative in the 1980s was that of the managed floating rate system. The Central Bank, under previous commitment with the IMF, had to intervene in order to maintain orderly conditions in the foreign exchange market. The exchange rate system operative in 1984 became the freely floating exchange rate system in contrast to the managed floating system that existed from the 1970s up to 1983 (CB Review, Jan, 1989).

6.6 Nominal vs Real Exchange Rate

Policy makers and economists are very much concerned about analyzing the implications of exchange rate changes for the economy and the BOP. The exchange rate itself does not convey much information, and to analyze the effects and implications of exchange rate changes, economists compute indices of the nominal and real rates. Take note that the definition of the exchange rate is now taken to be the foreign currency units per unit of the domestic currency.

Nominal Exchange Rate

The nominal exchange rate is the exchange rate that prevails at a given date. It is merely the price of one currency in terms of another with no reference made to what this means in terms of purchasing power of goods and services. Taking the second definition of exchange rate, \$2.00/P1.00 (foreign currency/domestic currency); this shows the amount of dollars that can be obtained for one peso in the foreign exchange market. If this is the exchange rate quotation in the foreign exchange market, then this is also the nominal exchange rate. The nominal rate can be presented in index form. For example, if in the base period, the exchange rate is \$2.00/P1.00, and one period later it becomes \$1.80/P1.00, peso, the nominal index of the peso will change from the base period value of 100 to 90. ($1.80 / 2 = .9 \times 100 = 90$). If the nominal exchange rate changes from \$2.00/P1.00 to \$2.50/P1.00, then the nominal index of the peso will change from its base value of 100 to 125 ($2.50 / 2.00 = 1.25 \times 100 = 125$). In the first example, the index decreased from 100 to 90 which reflects a depreciation of the nominal exchange rate while the

second example shows a rise in the index from 100 to 125 which reflects an appreciation of the nominal exchange rate.

A depreciation or appreciation of the nominal exchange rate does not necessarily imply that the country has become more or less competitive in the international market; for such a measure we must take a look at the real exchange rate.

Real Exchange Rate

The real exchange rate is the nominal exchange rate adjusted for relative prices between the two countries under consideration. The real exchange rate is expressed in index form algebraically:

$$Sr = S \times P/P^* \quad \text{where : } \begin{array}{l} Sr = \text{index of the real exchange rate} \\ S = \text{nominal exchange rate (foreign currency/domestic)} \\ \text{Currency} \\ P = \text{index of the domestic price level} \\ P^* = \text{index of the foreign price level} \end{array}$$

To better understand the nominal and real exchange rates in index form, let us construct a table showing the nominal and real exchange indices.

Period	Nominal Exchange Rate	Nominal Exchange Index	Peso(domestic) Price Index	US Dollar(foreign) Price Index	Real Exchange Rate Index of Peso
1	\$2.00/P1.00	100	100	100	100
2	\$2.00/P1.00	100	120	100	120
3	\$2.40/P1.00	120(2.40/2.00)	120	120	120
4	\$1.80/P1.00	90(1.80/2.00)	130	117	100
5	\$1.50/P1.00	75(1.50/2.00)	150	125	90

The real exchange rate index is constructed by multiplying the nominal exchange rate index by the peso price index and dividing this by the US price index.

Explanation of the data in the table:

For period 1, the real exchange index is set at 100. This means that a basket of Philippine goods priced at P100.00 will cost a US resident \$200.00 while a basket of US goods priced at \$100.00 would cost a Philippine resident P50.00. Between period 1 and 2, there is no change in the nominal exchange rate which remains at \$2.00/P1.00 ; however, the Philippine price index rises while the US price index remains the same. This means that there has been a real appreciation of the peso, Philippine goods now become relatively more expensive for US residents as they now have to use \$240.00 to purchase the original bundle of Philippine goods which now costs P120.00; The bundle of US goods costs a Philippine citizen P50.00. The decreased Philippine competitiveness is picked up by the real exchange rate appreciation of the peso from 100 to 120. Clearly, since the nominal exchange rate index has remained at 100, it has failed to pick up the change in competitiveness. Between periods 2 and 3, Philippine prices remain unchanged

While the US prices increase.; however, the peso appreciates sufficiently that the Philippines gains no competitive advantage.

* The student is encouraged to analyze the remaining information in the table.

From this example it is clear that the real exchange rate indices monitor changes in a country's competitiveness. The real exchange rate indices, unlike the nominal exchange rate indices, are not publishable on a daily basis because the price indices used are normally only published monthly.

6.7. Other Transactions in the Foreign Exchange Market

ARBITRAGE

One of the most important implications deriving from the close communication of buyers and sellers in the foreign exchange market is that there is almost instantaneous arbitrage across foreign currencies and financial centers.

Arbitrage refers to the purchase of a currency in the monetary center where it is cheaper, for immediate resale in the monetary center where it is more expensive, in order to make a profit. It is the exploitation of price differentials for riskless guaranteed profits. There are two types of arbitrage: two-point arbitrage and three-point or triangular arbitrage. **Two-point arbitrage or financial center arbitrage occurs when there are two currencies and two monetary centers are involved in arbitrage.** For example, if the dollar price of pounds were \$1.99 in New York and \$2.01 in London, an arbitrageur (a foreign exchange dealer in a commercial bank) would purchase pounds at \$1.99 in New York and immediately sell them in London for \$2.01, thus realizing a profit of \$0.02 per pound. As arbitrage takes place, however, the exchange rate between the two currencies tends to be equalized in the two monetary centers. Arbitrage increases the demand for pounds in New York thereby exerting an upward pressure on the dollar price of pounds in New York. At the same time, the sale of pound in London increases the supply of pounds there, thus exerting a downward pressure on the dollar price of pounds in London. This continues until the dollar price of pounds become equal in New York and in London e.g. \$2.00 = 1 pound. Thus eliminating the profitability of further arbitrage. When three currencies and three monetary centers are involved, we have **triangular or three-point arbitrage**. While triangular arbitrage is not very common, it operates in the same manner to ensure consistent, indirect or cross exchange rates between the three currencies in the three monetary centers. For example, suppose the exchange rates are as follows:

$$\begin{aligned} \$2.00 &= 1 \text{ POUND in New York} \\ 0.625 \text{ pounds} &= 1 \text{ EURO in London} \\ 0.80 \text{ EUROS} &= \$1.00 \text{ in Frankfurt} \end{aligned}$$

These cross rates are consistent because \$2.00 = 1 POUND = 1.60 EUROS and there is no possibility of arbitrage. However, if the dollar price of pounds were \$1.96 in New York, with no changes in the exchange rates as indicated previously, , then it would pay to use \$1.96 to buy 1 POUND in New York , use the 1 POUND to buy 1.60 EUROS in London and use the 1.60 EUROS to buy \$2.00 in Frankfurt, thus realizing a profit of \$0.04 on each POUND so transferred. As in the case of two-point arbitrage, triangular arbitrage increases the demand for the currency in the monetary center where the currency is cheaper, increases the supply of the currency in the monetary center where the currency is more expensive , and quickly eliminates the profitability of further arbitrage. As a result , arbitrage quickly equalizes exchange rates for each pair of

currencies and results in consistent cross rates for each pair of currencies and results in consistent cross rates among all pairs of currencies , thus unifying all international monetary centers into a single market.

SPOT TRANSACTIONS and SPOT RATES

The most common type of foreign exchange transaction involves the payment and receipt of the foreign exchange within two business days after the day the transaction is agreed upon. The two-day period gives adequate time for the parties to send instructions to debit and credit the appropriate bank accounts at home and abroad. This type of transaction is called a **spot transaction**, and the exchange rate at which the transaction takes place is called the **spot rate**.

FORWARD TRANSACTIONS and FORWARD RATES

A **forward transaction** involves an agreement today to buy or sell a specified amount of a foreign currency at a specified future date at a rate agreed upon today (**the forward rate**). The typical forward contract is for one month, three months, or six months, with three months the most common. For example, I could enter into an agreement today to purchase 100 POUNDS three months from today at $\$2.02 = 1 \text{ POUND}$. After three months, I get the 100 POUNDS for \$202, regardless of what the spot rate is at that time. Forward contracts for longer periods are not as common because of the great uncertainties involved. However, forward contracts can be renegotiated for one or more periods when they become due.

. If the forward rate is below the present spot rate, the foreign currency is said to be at a forward discount with respect to the domestic currency. However, if the forward rate is above the present spot rate, the foreign currency is said to be at a forward premium.. For example, if the spot rate is $\$2.00 = 1 \text{ POUND}$ and the three-month forward rate is $\$1.98 = 1 \text{ POUND}$, we say that the POUND is at a three-month forward discount of two cents . On the other hand, if the spot rate is $\$2.00 = 1 \text{ POUND}$ but the three-month forward rate is instead $\$2.02 = 1 \text{ POUND}$, the POUND is said to be at a forward premium of two cents.

FORWARD EXCHANGE SWAP

A **foreign exchange swap** refers to a spot sale of a currency combined with a forward repurchase of the same currency—as part of a single transaction. The swap rate (usually expressed on a yearly basis) is the difference between the spot and forward rates in the currency swap.

A **foreign exchange futures** is a forward contract for standardized currency amounts and selected calendar dates traded on an organized market (exchange). The futures market differs from a forward market in that in the futures market only a few currencies are traded; trades occur in standardized contracts only, for a few specific delivery dates, and are subject to daily limits on exchange rate fluctuations; and trading takes place only in a few geographical locations, such as Chicago, New York, London, Frankfurt, and Singapore. Futures contracts are usually for smaller amounts than forward contracts and thus are more useful to small firms than to large ones but are somewhat more expensive. Futures -while forward contracts cannot.

A **foreign exchange option** is a contract giving the purchaser the right, but not the obligation, to buy (a call option) or to sell (a put option) a standard amount of a traded currency on a stated date (the European option) or at any time before a stated date (the American option) and at a stated price (the strike or exercise price). Foreign exchange options are in standard sizes equal to those of futures IMM contracts. The buyer of the option has the choice to purchase or

forego the purchase if it turns out to be unprofitable. The seller of the option, however, must fulfill the contract if the buyer so desires.

HEDGING and SPECULATION

Hedging refers to the avoidance of a foreign exchange risk, or the covering of an open position. Speculation is the opposite of hedging. Whereas a hedger seeks to cover a foreign exchange risk, a speculator accepts and even seeks out a foreign exchange risk, or an open position, in the hope of making a profit. If the speculator correctly anticipates future changes in spot rates, he or she makes a profit; otherwise, he or she incurs a loss. As in the case of hedging, speculation can take place in the spot, forward, futures, or options markets—usually in the forward market. We begin by examining speculation in the spot market.

Speculation can be stabilizing or destabilizing. Stabilizing speculation refers to the purchase of a foreign currency when the domestic price of the foreign currency (i.e., the exchange rate) falls or is low, in the expectation that it will soon rise, thus leading to a profit. Or it refers to the sale of the foreign currency when the exchange rate rises or is high, in the expectation that it will soon fall. Stabilizing speculation moderates fluctuations in exchange rates over time and performs a useful function. Destabilizing speculation refers to the sale of a foreign currency when the exchange rate falls or is low, in the expectation that it will fall even lower in the future, or the purchase of a foreign currency when the exchange rate is rising or is high, in the expectation that it will rise even higher in the future. Destabilizing speculation thus magnifies exchange rate fluctuations over time and can prove very disruptive to the international flow of trade and investments.

REFERENCES:

Pilbeam, Keith, Ch 1.

Salvatore, D. Ch 14.

Usigan, Benjamin A. The Evolution of Philippine Exchange Rate Policies. CB Review, Jan, 1989.

EXERCISES:

Exercise 6.1

IDENTIFICATION: Write in the space provided the term/word referred to in the ff:

- _____ 1. The price of one currency in terms of another..
- _____ 2. The exchange rate regime where the exchange rate is determined by the forces of demand and supply without any intervention in the foreign exchange market.
- _____ 3. The exchange rate that is quoted at a given time .
- _____ 4. Purchase of one currency in the monetary center where it is cheaper for immediate resale in the monetary center where it is more expensive, in order to make a profit.
- _____ 5. The nominal exchange rate adjusted for changes in the relative prices between two countries.
- _____ 6. The avoidance of a foreign exchange risk.
- _____ 7. The exchange rate in foreign exchange transactions involving the delivery of foreign exchange one, two, three or six months after the contract has been agreed upon.
- _____ 8. The foreign exchange transaction where receipt and payment is done two business days after the transaction has been agreed upon.
- _____ 9. The amount by which the forward rate on the foreign currency is above its spot rate.

_____10. The purchase of a foreign currency when its domestic price is low with the expectation that it will soon rise, thus making a profit.

Exercise 6.2

ESSAY:

1. Briefly explain the effect of a depreciation of the Philippine peso against the US dollar to the Philippines' exports and imports.

6.3. ACTIVITY

1. Collect from a national newspaper the nominal exchange rate of the peso with respect to different currencies for a week. Describe the changes that occur in the exchange rates.

2. Continue with the analysis of the changes in the effective rates that was discussed in the text, between periods 3 and 4, and periods 4 and 5.

Exercise 6.4 .

PROBLEM-SOLVING:

1. Calculate the forward discount or premium for the ff spot and three month forward rates:

A. Spot rate = \$2.00 = 1 POUND and forward rate = \$2.01 = 1 POUND

B. Spot rate = \$2.00 = 1 POUND and forward rate = \$1.96 =1 POUND

2. Assume the ff. Exchange rates:

\$2.00 = 1 POUND in New York

410 YEN = 1 pound in London

200 YEN = \$1.00 IN Tokyo

CHAPTER 7

CURRENT ISSUES IN INTERNATIONAL ECONOMICS

LEARNING OUTCOMES:

After this chapter the student is expected to :

1. Discuss the different issues in the global economy that have affected international trade between and among countries.
2. Manifest a better understanding of problems that have challenged world economies and of policies that have been adopted, by each one and by all of them as one, to make the world a better place for everyone.

These are the different events that have affected world trade and the global economy:

1. The 1997 Asian Financial Crisis

Ref: Cohen, International Global Economy, pp.364-366.

<https://thebalance.comYoutube.Asian> Financial Crisis in 1997.

2. The 2008 Global Financial Crisis

Ref: Cohen,pp.367-370.

[https://the balance.comYoutube: The 2008 Financial Crisis](https://thebalance.comYoutube:The2008FinancialCrisis). Crash Course in Economics.

3. The US - China Trade War

Ref: <https://www.abc.com>
<https://www.scoup.com>
<https://www.thebalance.com>

The Economist (Youtube)

4. The COVID 19 Pandemic

Ref: <https://www.wto.org>
<https://unctad.org>
<https://preventionweb.net>
<https://m.youtube.com>

5. The TPP and Brexit and more to come in the future.....

Activity:

Research on a selected issue and do a critique on it.

- end of material -

REFERENCES

BOOKS:

- Appleyard, D. & Field, A. 8TH ed. 2010. International Economics. McGraw-Hill.*
- Carbaugh, Robert. 8th ed. 2001. International Economics. South-Western College.*
- Cohen, Theodore. 6th ed. 2012. Global Political Economy. Pearson.*
- International Monetary Fund. 2009. Balance of Payments and International Investment Manual. IMF Publication Services.*
- Klasen, Andreas. 2020. The Handbook of Global Trade Policy. John Wiley & Sons.*
- Krugman, Paul & Obstfeld. 2009. International Economics: Theory and Policy. Boston: Pearson-Addison Wesley.*
- McConnell & Brue. Economics: Principles, Problems and Policy. McGraw-Hill.*
- McEachern, William. 2012. Macroeconomics. Cengage Learning Asia Pte Ltd.*
- Mohtadi, Sharuz. 2019. A Guide to International Economics. Business Expert Press.*
- Nester, William. 2001. International Relations, Politics and Economics in the 21st Century. Wadsworth Thomson Learning.*
- Pilbeam, Keith. 1992. International Finance. MacMillan*
- Reinert, Kenneth A. 2012. An Introduction to International Economics: New Perspective in the World Economy. Cambridge University Press.*
- Salvatore, D. 11th ed. International Economics, Trade and Finance. Wilbey.*
- Salvatore, D. 6th ed. International Economics. New Jersey: Prentice Hall.*
- Van Den Berg, Hendrik. 2004. International Economics. McGraw- Hill.*
- Vohra, Munish. 2006. History of Economic Thought. New Delhi: Anmol Publications PVT. Ltd.*

DOCUMENTARIES:

- A Game of No Rules (Global Trade) . 2018. Economics.*
- The New Silk Road. 2019. Economics.*
- Trump's Trade War (PBS). 2019. Economics.*

INTERNET SOURCES:

[https:// www.slideshare. net.](https://www.slideshare.net) (discusses internal and international trade)

<https://www.wilby.com> . (supplements Salvatorre's book on international economics)

<https://www.econlib.org/index.html>.

[https://www. The balance.com.](https://www.Thebalance.com)

<https://www.scoup.com>.

<https://www.wto.org>.

<https://www.unctad.org>.

<https://www.psnews.net>.

The Economist. (You Tube)

Course Grading System

The grading system follows that of the University's:

Final grade = midterm grade (50%) + 2nd grading grade (50%)

Midterm grade = Class standing (70%) + midterm exam (30%)

2nd grading grade = Class standing (70%) + final exam (30%)

Class standing grade includes student's performance in: recitation, surprise quizzes, problem exercises, individual/group reports, research papers, and long (unit) exams

Classroom Policy

Teacher's classroom policy with regards to attendance, participation, behavior, use of mobile phones, etc will depend upon the teacher handling the course.

Consultation Time

Schedule of meeting with the teacher to discuss a particular problem with a student in order to provide advice will also depend upon the schedule of the teacher handling the course.